DOCUMENT RESUME

ED 461 767 CE 082 919

AUTHOR	Aring, Monika; Corbitt, Cathleen
TITLE	Best Practice Compass to Workforce Development: A Study. A Toolkit for Policymakers, Donors, Governments, NGOs and Practitioners.
INSTITUTION	Education Development Center, Inc., Newton, MA.
SPONS AGENCY	Agency for International Development (IDCA), Washington, DC. Center for Human Capacity Development.
PUB DATE	1996-00-00
NOTE	146p.; Produced by the Center for Workforce Development. Videotape not available from ERIC.
CONTRACT	HNE-5832-I-00-4019-00
AVAILABLE FROM	Education Development Center, Inc., 55 Chapel Street, Newton, MA 02158-1060. Tel: 617-969-7100; Fax: 617-969-4902; Web site: http://www.edc.org/.
PUB TYPE	Reports - Research (143) -- Tests/Questionnaires (160)
EDRS PRICE	MF01/PC06 Plus Postage.
DESCRIPTORS	Access to Education; Case Studies; Definitions; Developed Nations; Developing Nations; *Education Work Relationship; Educational Benefits; *Educational Practices; Educational Trends; *Evaluation Criteria; Evaluation Methods; Financial Support; Foreign Countries; Government Role; Government School Relationship; Guidelines; *Labor Force Development; Marketing; Nongovernmental Organizations; Nonprofit Organizations; Philanthropic Foundations; *Policy Formation; Postsecondary Education; Program Effectiveness; Program Evaluation; Public Policy; Questionnaires; Secondary Education; Strategic Planning; Success; Synthesis; Transfer of Training; Trend Analysis; Workshops
IDENTIFIERS	Africa; Asia; Europe; Latin America; Stakeholders; United States

ABSTRACT

This document, which is part of a toolkit for policymakers, donors, governments, nongovernmental organizations, and practitioners, presents the results of case studies of a group of 30 workforce development programs that were selected (during a 2-day workshop by a panel of 14 experts) as representing a balance among geographic regions served and as having general applicability to the types of situations faced by experts from the U.S. Agency for International Development. Section 1 provides information on the study and the toolkit that emerged from it. Section 2 explores the definition, challenge, and importance of workforce development. Section 3 identifies trends in workforce development investments and the common implementation issues faced by workforce development initiatives worldwide. Section 4 draws on lessons learned from the case studies and the literature review and analyzes what works in workforce development projects. Section 5 discusses the task of measuring the benefits of workforce development. Section 6 summarizes the preceding sections. (Contains 11 endnotes and 36 references. The following are among the items appended: a case-by-case comparison of pressures and trends affecting workforce development; a list of workshop participants; a workshop summary; meta contextual and guiding principles; the case criteria sheet for nominees; and nominations for possible workforce development case studies.) (MN)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 461 767

Best Practice Compass to Workforce Development

A STUDY

A Toolkit for Policymakers, Donors, Governments, NGOs and Practitioners

by
Monika Aring
Cathleen Corbitt

Produced by
Center for Workforce Development
Education Development Center, Inc.
55 Chapel Street
Newton, MA 02458-1060
617 969 7100

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

- ☐ This document has been reproduced as received from the person or organization originating it.
- ☐ Minor changes have been made to improve reproduction quality.
- • Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

CE062515

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

M. Aring

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC).

BEST COPY AVAILABLE

Compass to Workforce Development

Prepared by:

Center for Workforce Development
Education Development Center, Inc.
55 Chapel Street
Newton, MA 02158-1060

Funded by:

Center for Human Capacity Development
Bureau for Global Programs, Field Research, and Support
U.S. Agency for International Development

This publication was made possible with funding from U.S. Agency for International Development, contract number HNE-5832-I-00-4019-00.

Material from this publication may be quoted or copied provided proper reference is made to its authors.

For further information, contact:

Monika Aring
Center for Workforce Development
Education Development Center, Inc.
55 Chapel Street
Newton, MA 02158-1060
617-969-7000

Robert McClusky
Center for Human Capacity Development
SA-16 Room 201
U.S. Agency for International Development
Washington, D.C. 20523
703-875-4217

Acknowledgments

The authors would like to acknowledge Dr. David Finegold of the University of Southern California for his extraordinary contribution to this study. We would also like to thank a number of individuals who contributed their ideas, encouragement, and friendly criticism. These include Betsy Brand, Workforce Futures, Inc.; Peter Bowman, Gould Electronics; and Emily Vargas-Baron and Robert McClusky, USAID. A very special thanks goes to Gail Greenblatt Saporito, who did a superb job in laying out and coordinating the production of the *Toolkit*, while authoring some of the case studies. We would also like to thank the members of Gail's team, including Elizabeth Altman, Milissa Duncan, Liz Hiles, Julia Leney, and Maura O'Dea. A special thanks goes to Emily Osman, who designed the cover of the *Study*; and to Jennifer Roscoe and Michele Caterina for their advice and assistance in the production of the *Study*. We would also like to thank Mike Laflin for his advice and support throughout the project.

This *Study* would not have been possible without the extraordinary vision and commitment of the many individuals who lead the projects we examined in our worldwide research. We would also like to thank the many individuals who helped us find the best practice cases, including: John L. Anderson, Gary Bittner, Betsy Brand, Ethel Brooks, Mike Cacich, Brian Dabson, Ken Edwards, Jim Frasier, Gary Garman, Hong Tan, Joyce Kaiser, Jeff King, Mike Laflin, Hiram Larew, Robert McClusky, Frank Method, John Middleton, Claudio de Moura Castro, H. Jeffrey Rafn, Ron Raphael, Andrew Samet, David Waugh, John Wirt, Emily Vargas-Baron, Joy Wolf, and Robert Wrin.

TABLE OF CONTENTS

CASES AT-A-GLANCE

INTRODUCTION AND BACKGROUND 1

ORGANIZATION OF THE STUDY 2
USAID CONTEXT FOR THE DEVELOPMENT OF THE TOOLKIT 3
USAID STRATEGIC OBJECTIVES AND PURPOSE OF THE RESEARCH 6
METHODOLOGY 8

THE CHALLENGE OF WORKFORCE DEVELOPMENT 14

A FOUNDATION FOR HUMAN CAPACITY DEVELOPMENT 14
A FOUNDATION FOR IMPROVED HEALTH, CIVIC LIFE, AND ENVIRONMENTAL PRACTICES 15
A SHIFT IN PERSPECTIVE 16
THE SIGNIFICANCE OF WORKFORCE DEVELOPMENT 19
THE OPPORTUNITY AND THE CHALLENGE 20
CURRENT EXTERNAL PRESSURES INCREASING THE DEMAND FOR WORKFORCE DEVELOPMENT INVESTMENT 25

INVESTMENT TRENDS IN WORKFORCE DEVELOPMENT 30

BROAD TYPES OF WORKFORCE DEVELOPMENT 30
IMPLEMENTATION ISSUES IN WORKFORCE DEVELOPMENT 46

"WHAT WORKS": FINDINGS IN BEST PRACTICE 52

ANALYSIS OF CASE STUDIES 52
THE ROLE OF GOVERNMENT 76

BENEFITS FROM INVESTING IN WORKFORCE DEVELOPMENT 85

SUMMARY 89

ENDNOTES 94

REFERENCES 95

APPENDIX

Cases At-A-Glance

The chart below summarizes main descriptors and features of each case. The chart is provided to assist you in locating cases that best match your situation and/or have features and approaches you would like to explore in depth.

Case	Region	Country	Scale	Description	Targeted Populations	Outstanding Features
EMPRETEC	Africa	Ghana	National	Training for microenterprise development	• potential entrepreneurs between the ages of 23 and 60	• success at converting promising individuals who have previously been employed in the public sector to entrepreneurs who manage to succeed despite difficult economic circumstances and poor infrastructure • structured training that builds entrepreneurial and management skills
Agence d'Execution des Travaux d'Interet Public (AGETIP)	Africa	Senegal	National	Training for microenterprise development (construction and infrastructure industries)	• youth • entrepreneurs • small and medium size construction firms	• whole systems approach, combining private sector development with the development of a market for training • emphasis on transparency, political independence, economic efficiency, and impartiality • strong results and replication in other African nations • use of incentives to develop a transparent public and private bidding system • emphasis on providing long- and short-term strategies for training and employing the country's poor youth • focus on deliverables
Workers College (University of the Western Cape)	Africa	South Africa	Regional	Postsecondary school and trade union partnership offering • short- and medium-term skills upgrading in a variety of industries • democracy-building skills training	• primarily trade union workers and leaders	• genesis in the labor movement • breakthrough partnership between unions and university • success in undertaking the training and skills improvement of blue-collar workers in the face of opposition from government and business and in a racially and labor-management polarized society • key role of unions, traditionally a stronghold of workers of color in South Africa, in shaping the curriculum and ensuring the skills developed are portable to other firms and include organizational skills and leadership • inclusive philosophy and practice • explicit training connection to increasing democracy-building • worker-centered curriculum design

Case	Region	Country	Scale	Description	Targeted Populations	Outstanding Features
Planta Piloto de Procesos Industriales Microbiologicos (PROIMI)	Americas	Argentina	Inter-national	Advanced biotechnology training	• master's and doctorate level students in microbiology and biotechnology	• focus on applied research that directly affects the broad economic development of Argentina and South America • focus on skills that will help make the region more competitive in international trade • hands-on training in technology and management-related skills • partnerships with employers and other countries
Telecurso 2000	Americas	Brazil	National	Television program for basic & manufacturing skills training	• unskilled, semi-skilled workers, primarily in manufacturing	• wide delivery system through electronic media • open access and multiple points of entry into training • student-controlled learning • pedagogically rigorous and practically grounded curriculum • distance education paradigm • industry-driven with multiple partners from all levels
Chile Joven	Americas	Chile	National	National training system for entry into basic manufacturing and service sectors	• focus on youth aged 14-24, but does train all types	• use of government incentives to develop a private-sector market for education and training of poor youth • broad, national scope • focus on bringing large numbers of marginalized youth into the labor market • demonstrates how a middle income country learned from examples in many other highly and less well developed countries • focus on transparency and intragovernmental coordination • close ties to market demands for skill requirements • focus on deliverables, placement and graduation rates • developing a virtuous cycle where trainers must keep improving their skills to find work
Zamorano	Americas	Honduras	Inter-national	Proprietary agricultural school	• students aged 16-24 who plan agriculture careers	• developing in its students habits of mind and heart which produce leaders • integrates learning by doing with strict discipline • educates all students–regardless of economic or social status–to very high quality standards • prepares graduates for self-employment as well as for highly competitive jobs in the formal sector • students and faculty work with many NGOs to train micro-entrepreneurs • high success rate of graduates in many professions
Servicio Nacional de Adestramiento en Trabajo Industrial (SENATI)	Americas	Peru	National	National education and training system to develop basic manufacturing industry skills	• youth	• institutionalization, standardization, and improvement of education and training in manufacturing throughout Peru • depth, broad coverage, and quality of basic skills training in the manufacturing sector • extensive replication throughout all of Peru's 37 diverse provinces • success in adapting the dual system to a different culture • employer commitment • ability to survive over 35 years despite considerable political and economic pressures • ability to build and maintain an education and training system alongside the formal education system
Miami-Dade Community College	Americas	United States	Local	Post-secondary school offering two year degrees, skills training, and preparation for four year degrees	• all	• building partnerships with the local business community • contributing to economic development by training the workforce for the region's needs • serving a variety of needs for a diverse population • fostering lifelong learning in the community • encouraging professional development

Case	Region	Country	Scale	Description	Targeted Populations	Outstanding Features
Australian National Training Authority (ANTA)	Asia	Australia	National	Policy coordination body that creates national framework for all education and training in the country	• all Australians	• creates a world-class education and training system with standards, policies, and frameworks that are consistent across all of the country's training providers • includes all interested partners in the development of the policies and planning affecting the training system so that it responds to all clients and their training needs • ensures the system responds to education and training best practices, as well as workers' career objectives as they change and grow over time
Regional Institute for Research in Workforce Formation, Education, and Development (RIBB)	Asia	China	Regional	Regional education and training research and development institute creating an education and training system for the City State of Shanghai	• youth who have completed basic nine years of education (most of the youth in Shanghai)	• focus on conducting research and development following the model of Germany's Bundesinstitut fur Berufsbildung (BiBB) • conducts research and then develops and tests pilot programs that can be brought to scale within 5 - 9 years • prepares Shanghai youth for broad sectors of the economy, such as hospitality, financial services, manufacturing • emphasis on establishing sustainable partnerships between many of the stakeholders in an entire province of China • ability to introduce broad systems change into an established culture whose labor markets were narrowly defined within the Confucian and subsequent Communist tradition • consults with Shanghai policymakers and helps them develop new laws that provide incentives for employers, government, fledgling organized labor and educators to invest in a workforce development system
Social Fund for Development (SFD)	Asia	Egypt	National	Government training & economic development initiative offering: • microenterprise development • retraining former public sector employees • assistance to military returnees • many other projects	• the poor • entrepreneurs • NGOs • redundant public sector workers • Gulf War veterans	• local level NGO design and implementation with government support • a combination of microenterprise support and formal-sector training for the poor • assistance and retraining to downsized public sector workers • large scale government initiative that coordinates between agencies • autonomous • flexible and responsive to local level needs using a participatory, self-help philosophy • employing and refining a strong evaluation and monitoring system • proven to have had substantial economic and social impact
Self-Employed Women's Association (SEWA)	Asia	India	Local	Registered trade union that conducts: • Microenterprise development • Skills upgrading • Advocacy and organizing training • Legal protections training	• self-employed, poor women	• driven by a registered trade union of self-employed women • serves a population of the most disenfranchised • uses a cooperative leadership model that draws from its membership • focuses on developing all aspects of its membership, including economic, democratic participation, and political awareness • provides training in a variety of skills, both trade-specific and portable • combines training and policy activities • is flexible in its offerings and clearly identifies and meets the target population's needs on an ongoing basis • takes a leadership role in changing the conception of the value of women's economic participation • is a comprehensive combination of labor union, women's cooperative, pressure group, liaison, educator/trainer, and banker

Case	Region	Country	Scale	Description	Targeted Populations	Outstanding Features
Penang Skills Development Centre (PSDC)	Asia	Malaysia	Regional	Multi-national industry training center	• currently employed, skilled manufacturing sector workers • not employed unskilled or semi-skilled workers seeking employment in manufacturing	• industry-led • sustainable and self-financed • strong in technology transfer • prepares both skilled and semi-skilled workers for high technology employment • a portable, multi-skilled curriculum • measurable results • replicated in other Malaysian states • originated in Singapore
Integrated Recruitment, Training and Placement Program (IRTP)	Asia	Philippines	Local	Foundation program that facilitates basic training at workplaces and regional vocational education centers	• poor urban youth 18 years or older in the squatter settlements of Manila and other selected areas	• links youth with employers who agree to provide training and to hire the graduate upon completion of training at above-poverty wages • links employers, youth, with regional vocation education centers to improve quality of education • brings economic development policymakers together with educators, employers, and workers' guilds to catalyze a new education and training policy (social partnerships model) • links youth in program with community agencies to provide help with transportation, housing, whatever is needed • advocates in government on behalf of poor youth
Singapore Skills Development Fund	Asia	Singapore	National	Arm of the National Productivity and Skills Board with the power to tax employers and allocate training funds	• currently employed workers at the mid-level (not entry and not senior management level) and their companies	• taxes employers for using unproductive (low or unskilled) labor • pools revenue and uses it to subsidize employer led training • has support of employer association, organized labor • is used to achieve Singapore's long-term goal to match standard of living of Switzerland by year 2010 • part of long-term strategy to move country's employers to high wage high skill base • part of long-term strategy to develop competitive advantage for the country in the region

Case	Region	Country	Scale	Description	Targeted Populations	Outstanding Features
National Training Fund	Europe	Czech Rep.	National	Funding organization that provides support for management training for newly privatized and privatizing companies	• currently employed mid-level managers who will move into newly privatized industries or serve in a restructured public sector	• conservative, free-market economic framework • extensive links to several government ministries • ability to quickly respond to the training needs of a rapidly developing private sector • reliance on private sector mechanisms to ensure transparency and equity • expansion into other training areas beyond management, such as helping to redevelop the country's vocational and technical education system
Dual System	Europe	Germany	National	National training system that prepares 60% of the country's youth for entry into 300 highly skilled manufacturing and service sector occupations	• youth aged 17-22 who do not attend university	• brings together and holds accountable all the stakeholders in the system for developing the skills of the nation's youth • demonstrates that it is possible to prepare individuals with equity and with high quality results • provides youth with clear links to employers and high status jobs • functioning as a learning system where information from each stakeholder (employers, students, union members, trade associations, schools, and chambers of commerce) can swiftly be shared through the local, regional and national network. • has been widely examined and replicated in many forms throughout the world
Building Trades Craft Union Training Consortium	Europe	Poland	National	Joint partnership among governments and labor unions to train craftsmen to teach construction methods and self-sufficiency to unemployed workers	• unemployed construction workers	• brings together labor, management, government, and workers so that each group works as an equal partner • provides an example of how the supply and demand for training can be improved across national boundaries • trains workers to help rebuild Poland and to become self-sufficient
Retraining of the Military Program	Europe	Ukraine	National	Provide assistance in retraining, job placement, health and psychological services to ease the transition to civilian life	• downsized military personnel and their families	• focus on retraining retired military personnel for civilian work • provides comprehensive career and psychological counseling • training of retired military personnel to help develop enterprises and a private sector • comprehensive support to its clients, including ex-military personnel's families • broad geographic and participant coverage

I. Introduction and Background

This Study comprises one-third of Education Development Center, Inc.'s (EDC's) Compass to Workforce Development Toolkit. It is accompanied by a Guidebook and a Video. Together, these three pieces provide the background, principles, groundwork, examples, and inspiration to help donor organizations, nongovernmental organizations (NGOs), policymakers, foundations, private sector investors, and United States Agency for International Development (USAID) missions implement workforce development projects around the world. Each piece is important.

From the Video, you will see workforce development in practice and hear what it has meant to workers all over the world.

From the Guidebook, you will explore 20 best-practice case studies—places on six continents where people's lives have been improved by investment in their skills and productivity. The Guidebook also provides regional and country-level background for each profiled program.

From this Study, you will learn the background for the creation of the *Compass Toolkit*, the definitions and significance of workforce development, the challenges of implementing workforce development projects, the social and economic issues addressed by current workforce

development investment, and the principles of best practice common to successful workforce development programs.

The three pieces were designed so that beginning with any one of them provides a clear view of workforce development. Taken together, they offer a comprehensive look at investing in workers from a variety of perspectives. EDC suggests beginning with the Video, as it provides a visual imprint of and a basic introduction to workforce development. What you see in the Video may draw you to the Guidebook to read the case studies profiled in thumbnail on screen. After you have firmly embedded the pictures and words from a few examples into your growing understanding of the subject, moving to the Study will expand the specific information in the case studies into a set of principles for best practice and will provide the context in which to ground them. Then return to the Guidebook to read more of the cases and to delve deeper into how others have implemented workforce development. Finally, EDC suggests using the tables in the Guidebook and the analysis in the study to draw parallels between your context and those in some of the best-practice models. This may help you as you think more deeply about the kind of workforce development investments your nation might make.

A. Organization Of The Study

The Study provides the theoretical and conceptual grounding for workforce development—from definition through current external challenges through analysis of best practice. The analysis of best

practice is *not* an evaluation of various workforce development projects. Instead, the study analyzes a number of criteria for effective workforce development projects, programs, or systems by examining the extent to which they are met in each of the cases.

Section I provides an introduction to the *Compass Toolkit* and the Study, the background for USAID's charge to EDC, and the methodology EDC used for developing the case studies (presented in detail in the Guidebook) and the Study. Section II explores the challenge of workforce development, defining what is meant by "workforce development" and discussing why it is of growing importance. Section III outlines trends in the types of workforce development investments and the common implementation issues initiatives face. Section IV analyzes "what works" in workforce development projects, drawing lessons learned from the case studies and the literature review. Section V discusses the task of measuring the benefits of workforce development. Section VI summarizes the discussion of workforce development in this study and provides a springboard to the Guidebook's case studies.

B. USAID Context For The Development Of The Toolkit

Workforce development has been a component of USAID programming since the inception of foreign aid. It is one of the two strategic objectives of the Center for Human Capacity Development (HCD), focusing on improved secondary and postsecondary education and training systems,

linkages, and networks. USAID's "training" budget supports the training of 14,000 people per year and costs approximately $600 million annually. The 18 field missions plan to spend nearly $20 million for vocational education and technical training in FY 1996, as they did in FY 1995.

The need for a more capable and productive workforce is recognized in virtually every country and region of the world. The World Bank reports that 120 million workers are unemployed worldwide in a global workforce of 2.5 billion (which will grow to 3.7 billion in 30 years). Nearly 1.3 billion live on a dollar a day or less (World Bank, 1995). The great disparity between average earnings in developed and developing countries (60:1); (World Bank, 1995) continues to grow. Developing the workforce directly links investments in school-based, basic secondary education and lifelong learning, (traditionally considered human capacity development) with economic development. The 1996 United Nations Human Development Programme (UNDP) Report calls for forging vastly more powerful and humane links between economic growth and human development (UNDP, 1996). The report points out that when these links are forged with policy and determination, they can mutually reinforce each other such that economic growth will rapidly improve human development. Moreover, the report emphasizes that it is possible to achieve growth with equity, and that this growth can contribute to the development of sustainable environmental practices. The report goes on to say that if present global economic polarization continues to widen the

gap between rich and poor nations, economic disparities will move from "inequitable to inhuman" (UNDP, 1996).

Calls for action by the World Bank (*Workers in an Integrating World, 1995*) and the UNDP report echo USAID's request to EDC:

1. In all parts of the world, find examples of new approaches that show best practice in expanding opportunities for people to participate in productive work.

2. Find examples of workforce development initiatives that lead to economic growth while increasing equity and health, civic participation, and the quality of the environment.

3. Analyze "what works" and help donor organizations, policymakers, private sector investors, and missions make strong investments in workforce development.

Best-practice examples in the form of case studies demonstrate how participating in productive work enriches workers, their families, their communities, and their societies. At the same time, case studies show how developing the workforce can improve larger systems, such as the flow of free and open trade among countries. The 20 case studies that can be found in the Guidebook and Video that accompany this study are powerful examples of best practice that show how developing the

workforce links economic development with human and social development.

C. USAID Strategic Objectives And Purpose Of The Research

This research project was conceived by USAID's Center for HCD at the Global Bureau in Washington, D.C., in the summer of 1995 as a means of supporting the work of missions as they work to accomplish the four strategic objectives approved by Congress: (1) health and population control, (2) economic growth, (3) sustainable environment, and (4) democracy building. Although this study was not designed to capture increased capacity in building democracies, health and population control or sustainable environmental practices, several of the cases demonstrated how increasing people's ability to participate in productive work improved their ability to participate in society, which may result in people building democracies. Finding links between developing the workforce and health and/or sustainable environmental practices was more problematical, as none of the programs that were selected for analysis attempted to tackle all of the four strategic objectives at once. Rather than viewing education and training as marginal to the four strategic objectives, EDC's twenty best practice cases and this supporting study offer provocative insights into how workforce development is an integral part of at least one of the strategic objectives, economic growth. Faced with dramatic budget cuts, this perspective on workforce development offers promising points of leverage for donors, private sector investors, missions, countries, and economic regions that cannot

afford the luxury of single-issue agendas. By documenting the links between workforce development and the four strategic objectives, the Center for Human Capacity Development will be in a better position to serve the needs of the missions that are in our reinvented government, the HCD's "customers."

In September 1995, HCD contracted with the Center for Workforce Development at EDC to carry out a 9-month study of workforce development to produce (1) a Guidebook documenting 20 cases of best practice found around the world, (2) a Video accompanying the Guidebook, and (3) a Study. Members of the EDC team worked closely with USAID staff first to identify potential case studies and then to select 20 cases that best met all the criteria developed in a meeting of world donors and multinationals held in Washington, D.C. in the autumn of 1995. EDC team members visited 11 of the countries personally and communicated with the other 9 by means of fax, telephone, and written materials.

The purpose of the *Toolkit* is to provide information that stimulates conversation among USAID missions and other interested investors, such as world donors and multinationals, as well as the many extraordinary leaders throughout the world who are part of the workforce development effort. EDC and HCD hope that this information will help donors, investors, corporations, policymakers, and administrators to make more strategic investments in workforce development initiatives around the world.

D. Methodology

1. Workshop

In November 1995, EDC convened a meeting of 14 experts from business, multinationals, labor, state and federal agencies, international donor organizations, USAID officers, and the university community (see the Appendix for a list of attendees). The two-day workshop was held in Washington, D.C., to identify and present 20 best-practice cases in workforce development, and to shape an accompanying Study and a companion Video. At the workshop, participants identified a list of Guiding Principles to direct the selection of cases:

- promotes and sustains economic development
- employer participation
- ability to regenerate and renew itself
- partnership
- multiple and leveraged funding sources
- performance-driven quality outcomes
- skills improvement leading to expanded choices
- market-driven design that is responsive and anticipatory
- integration with the basic education system
- customer-driven
- accessible and equitable
- personal responsibility on part of trainee/student expected
- effectiveness and efficiency

- promotes lifelong learning
- trains for a range of possibilities

Rather than using these principles as a list of "must-haves," EDC accepted them as a list of criteria, not all of which needed to be fulfilled, for a project to be considered.

Over the course of the two days, workshop participants then generated a list of 8 broad categories and some 60 related subcategories in which to evaluate and select cases. The 8 categories of analysis were:

1. Governance
2. Market orientation
3. Collaboration of stakeholders
4. Education, access, portable skills, and lifelong learning
5. Financing
6. Assessment, feedback, and continuous improvement
7. Technology
8. Replicability

Detailed proceedings of the two-day workshop, including a list of all the related subcategories, is included in the Appendix.

In addition, participants generated a list of potential cases for EDC to examine. This list numbered more than 60 nominees and can also be found in the Appendix.

2. Selecting Best-Practice Cases and Reviewing the Literature

EDC began the search for best-practice cases using the nominees generated at the workshop and in conversations with outside experts[1] from the Organization for Economic Development (OECD), RAND Corporation, and the United States General Accounting Office (GAO). EDC augmented this list with:

- extensive secondary research that included searches of the databases of major international donor organizations, including the World Bank, the Overseas Development Agency (Great Britain), the United Nations, the InterAmerican Development Bank, the International Labor Organization, the OECD, and USAID
- Internet searches
- contacting a number of other international development and workforce development specialists who could not be present at the workshop
- searching for written reviews in workforce development and consulting a number of authoritative reviews.

More than 100 nominees for case studies were culled from all these resources. Finally, a number of authoritative reviews and other works on the subject of workforce development were consulted for models and for the literature review, including *Workers in an Integrating World, Vocational Education and Training: A Review of World Bank*

Investment, Training for Work in the Informal Sector, Education and Training for the Informal Sector, Human Development Report, The Fifth Discipline, and *Labor Markets and Social Policy in Central and Eastern Europe.*[2]

The EDC research team conducted an initial preliminary investigation into each case by reading available materials and/or contacting project staff. From this preliminary investigation, approximately half the nominees were ruled out because they did not adequately fulfill the criteria categories defined at the workshop. The remaining cases were summarized by one researcher and then presented to the entire research team.

This list of 50 strong candidates was narrowed to 30 by the research staff, based on the degree to which the project, program, or system met the criteria. Attention was paid to ensuring that the list of 30 cases accurately reflected the diversity of workforce development investments, the diversity of economic and social situations around the world, and the diversity of target populations. In general, EDC ensured that the list of 30 cases achieved a balance among geographic regions served and had a general applicability to the types of situations USAID missions face.

Using the working definition of workforce development suggested in the workshop as "*enabling all people to have access to opportunities that enhance the development of their skills, knowledge, and aptitudes such that they are able to participate in productive work, either by means of*

self-employment or by working for someone else," together with the criteria generated at the workshop, EDC found a great many more cases than anticipated, and it was often difficult to select one case over another, as the diversity of cases and approaches was impressive. Where two cases appeared to be close contenders for selection, EDC selected the case on the basis of other factors, such as:

- addressing a population group not represented in other cases (location, age, employment status, disadvantage)
- achieving geographic balance among cases
- what level the project operated on (local, regional, national, international)
- who the primary sponsor was (education institution, employer, NGO, local government, national government, donor organization)

EDC and HCD discussed the 30 cases and together decided to further investigate all the cases using a questionnaire developed from the 8 categories and 60 subcategories delineated in the workshop (see Appendix). Eleven of the cases received site visits by members of the research team. The remaining 19 were further investigated through phone/fax contact by the research team, first-person contacts by people outside the core research team, and/or through obtaining and reading further written materials.

Through these various measures, EDC obtained answers to as many of the questions as possible. Using these answers, EDC drafted a case study

for each of the 30 projects. These draft case studies were presented to HCD officials. HCD, with EDC's recommendations, selected the final 20 cases presented in the Guidebook. (For further information on the format of the case studies, please see the Guidebook).

II. The Challenge of Workforce Development

In this section we will review the context for workforce development by examining its foundations in the improved development of human capacity, i.e., education, and economic development. We will also discuss the potential for leveraging investments in health, democracy building and improved environmental practices by means of developing a workforce. We then propose a working definition of workforce development, and review the opportunities and challenges for developing a workforce in a world where one half of all workers live on less than a dollar a day.

A. A Foundation For Human Capacity Development

Workforce development is one of the most important tools for increasing the capacity of people, both individually and collectively, to fulfill their economic and social potential. When people have the skills they need to participate in productive work, working either for themselves or for others, they possess the means to empower themselves, their families, and their societies to achieve a better future.

In this way, workforce development is a tool for empowerment of the individual as well as those with whom she interacts, equipping her to participate with others in order to create a good life for herself, her family, her community, and her society, much as good health does.

Developing the workforce helps economies to grow and decreases the burden on social services by moving people from dependency to a place where they can provide for themselves and their families. Workforce development taps the poor's most abundant asset, their labor, and channels it in directions that benefit the individual and the family in increased income and self-sufficiency (Middleton, 1991). Workforce development starts by improving people's skills in basic literacy and numeracy. For example, World Bank and other publications suggest that much of the remarkable economic growth of many of the Asian tigers can be attributed to consistent investments in basic education (World Bank, 1995). Skills in basic literacy and numeracy provide the foundation for increasingly more sophisticated human interaction These are followed by increasingly more sophisticated human interaction skills, as well as more advanced technical skills required to succeed in ever more complex tasks and environments. Ultimately, workforce development is about enabling people to learn and earn over their lifetime.

B. A Foundation For Improved Health, Civic Life, And Environmental Practices

Workforce development is also closely linked to producing other changes in society important to USAID missions and other investors, such as population and health (as women's incomes grow, birthrates decrease), democracy building (as people learn the skills they need to participate in productive work, they are more skilled at participating in

civic life; Aring & Brand, 1996), and improved environmental practices (through learning better management of resources). For example, the "Rust Belt" states of the Great Lakes region in the United States have made a remarkable economic recovery after the recession of the 1980s by investing heavily in environmental technologies and training. In the heyday of mass production, states and businesses considered environmental improvements to be a cost. As the Great Lakes states move toward a knowledge-based economy, however, they and many of their corporations consider investing in good environmental practices to be a means to give them a competitive edge in environmental technologies. Investing in the skills and tools needed to develop new environmental technologies, among other factors, contributes to the region's performance as the top producer of exports in the United States.[3]

C. A Shift In Perspective

The term *workforce development* is interpreted in many ways. For example, it is often associated with vocational education and training, adult literacy, human capital investment, skills training, occupational standards, employer-based training, school-based training, reemployment, training of the unemployed, and lifelong learning. While each of these interpretations describes an important part of the whole we call workforce development, it is the *relationship* among them, to basic education, and people's ability to participate in a global economy that determines a society's ability to sustain its citizens. For example, consider workforce development in the case of Germany's highly

replicated dual system. There, youth learn fairly high levels of reading and arithmetic at primary and secondary schools. To complete their secondary education, they continue learning for three and a half years in parallel settings, at workplaces and in public schools. While it is certainly true that the dual system is about vocational and technical education, closer examination reveals that it could also be described by terms such as *employer-based training, human capital investment, literacy training, use of skill standards,* and *skills training.* The dual system could equally be attributed to Germany's tradition of apprenticeships, its social democracy, public-private partnerships, export promotion, and investment in economic development. Since all of these terms can be considered as an accurate description of the dual system, what we see depends on where we stand and on the language that's available to us at any given time.

A slight change in perspective often reveals startling new vistas. Instead of viewing workforce development solely as education and training for employment, this study offers a possible new interpretation, where workforce development is about "*enabling all people to have access to opportunities that enhance the development of their skills, knowledge, and aptitudes such that they are able to participate in productive work, either by means of self-employment or by working for someone else.*" This interpretation was developed as part of this study and has not yet been adopted by any expert community. However, views expressed by expert participants at a November 1995 workshop (see Methodology section) helped in the development of this broader definition. It is also in

part derived from a definition of learning as a function of participation, whereby learners construct knowledge in a variety of settings. Combining the words pedagogy or learning and participation results in partagogy, a term coined by Beryl Levenger (1996). This new term puts learning squarely into activity and makes it easier to understand how people can learn at work and in schools. We hope that this Study, Guidebook, and Video will spark much discussion about the validity of this new interpretation. This new definition also suggests that all types of learning—academic, applied, vocational, contextual—are important, and that no one type is inherently superior to any other.

Thinking about workforce development in terms of enabling people to access and participate in productive work provided the study team with a vantage point that reveals the full variety of best practice found in countries in differing stages of economic and social development. This new interpretation of workforce development encompasses a rich depth and breadth of activities, from grassroots entrepreneurship training in Ghana to a Pan-American agricultural school in Honduras. This interpretation includes the national dual system in Germany, a program to help poor urban youth in Manila escape poverty, and Singapore's *National Skills Development Fund*, which makes it more cost-effective for employers to train current workers than to add low-skilled, less productive workers. As we consider the variety of approaches the new interpretation makes available, we can appreciate workforce development in its many forms and begin to understand the ways in which it can help to reduce the gap between rich and poor nations.

D. The Significance Of Workforce Development

The 1995 World Bank study "*Workers in a Developing World*" suggests that we are faced with two very different scenarios. The first, a scenario of inclusion, suggests that the disparity between workers in rich and poor nations can decrease—given the right policies. The second, a scenario of divergence, is what will happen if we continue on our present course. In this scenario, the gap between rich and poor will continue to widen, with unthinkable political and economic consequences for the world. According to World Bank president James David Wolfensohn (DeMott, 1996), the "operative words are sustainable, equitable growth, with emphasis on connecting the poorer economies to the global economy." Reducing the gap between rich and poor within a nation and between nations confronts the donor community, policymakers, and corporations with the need for a new paradigm. Governments cannot long survive pressures caused by huge populations of people who clamor for a chance to earn their livelihood. Donors no longer have the resources for enormous, one-issue investments. A new paradigm is needed, one that replaces old, established ways of thinking about workforce development as vocational, technical, or, at best, second-rate education with one that recognizes that successful initiatives connect ideas, advice, networks, and partnerships with resources (DeMott, 1996).

Investing now in projects and policies that develop a country's workforce can be a formidable way to start closing the gap. The World Bank found

that "other things equal, the more educated a nation's workers, the greater their potential to catch up with prevailing technologies and so achieve more rapid growth output" (World Bank, 1995). By increasing the skills of the workforce, creating new business, reorganizing economies through privatization, promoting individual responsibility, and bringing traditionally separate organizations together for their mutual benefit, workforce development puts the tools for improving incomes, standards of living, social indicators, and personal achievement into the hands of workers, employers, and community-based organizations. Perhaps an extension of an old adage puts it best: Give people a fish and they eat for a night. Teach people to fish and they eat for a lifetime. Teach people how to understand fish and adapt fishing techniques to different waters, and their families, communities, and societies have the means to support and nourish one another throughout a lifetime.

E. The Opportunity And The Challenge

Many recent developments, such as the accelerating inflows of private money into poorer countries, are encouraging, in that developing nations that want access to these funds must become "subject to the rigors of private markets." Imposing such rigors is likely to involve training for work. According to a lead article in the *Christian Science Monitor* (Francis, 1996),

> "private" money has become far more important to economic development in many poorer countries than "official" money. This year private flows will exceed by

> 16 times the amount sent to "emerging markets" by rich nations as foreign aid and by numerous international development banks. By 1996 the flow of money into 31 "major" emerging markets should reach a record $224.8 billion, up from $208 billion in 1995....This compares with $14.1 billion from all official sources, including the World Bank, the International Monetary Fund, regional development banks, and United Nations agencies.

Other trends are equally encouraging, especially in information technology, as they support movement toward the "inclusion scenario" posited by the World Bank study *Workers in an Integrating World* (1995). According to a recent OECD article, these factors include the following:

- The costs of acquiring technology are decreasing as barriers to entry into the knowledge-based economy are being dismantled, especially for individuals with access to the Internet.
- "Natural monopolies" and large state-run enterprises are dissolving.
- Technology can be disseminated to firms via inter-firm networks.
- Governments can provide powerful frameworks that encourage collaboration among employers, educators, trainees, and organized labor.
- Links among the public, private, and academic sectors are increasingly important for innovation and competitiveness.

- Lower- and middle-income countries possess a great natural resource in their people: Workers in LICs and MICs account for almost 80 percent of the world's industrial workforce. (Stevens, 1996)

These opportunities are not without corresponding challenges to fledgling workforce development initiatives:

- The rate of technological innovation in the production of goods and services is accelerating, making it harder for developing nations to "catch up."
- Increases in productivity usually mean decreases in employment in the short to middle-term.
- The life cycle of products continues to decrease, leading to quick obsolescence of skills.
- Global competition continues to intensify, bringing about rapid changes that require workers and enterprises to be increasingly flexible.
- Widespread disillusionment with past policies may make it more difficult to launch new programs.
- Single-source funding for workforce development projects is drying up—programs must quickly find financial sustainability.
- It is difficult for many public sector policymakers to keep pace with the rate of change in the private sector in the global economy.
- Current economic analytical tools cannot adequately measure returns on investment in human capital, making it hard for policymakers and businesses to justify investments.

- The role of the nation-state is coming under pressure as economic actors collaborate and compete across traditional economic boundaries.

In addition to practical concerns such as money, leadership, and infrastructure, as well as the problems of how to develop more job opportunities along with training, developing workforce projects are often thwarted by old and familiar mental barriers. For instance, when confronted with painful facts about the lack of opportunities in low-income countries, donors, policymakers, and bureaucrats can easily fall into denial by simply ignoring a situation that seems hopeless. Under the guise of "being realistic," we slip into a state of paralysis where any action seems unlikely to produce a better result (Griffin, 1996). Often we avoid responsibility by continually analyzing a problem without ever actually doing anything about it (Eagleburger & Barry, 1996). Another equally dangerous trap is defining progress as the production and consumption of more and more goods and services while employing ever fewer people at unforeseeable costs to family, society, and the environment (Rifkin, 1995; UNDP, 1996). Barriers such as these call out for the development of a new paradigm, where new ideas about productive work can generate new opportunities to compensate for the loss of employment that often accompanies increases in productivity.

The impact of these ways of thought are often most visible in less developed nations. "Jorge," a Peruvian youth who is learning manufacturing skills on outdated equipment with no pollution controls,

asks a question similar to questions posed by virtually everyone else EDC interviewed: "Should we forever play catch-up or is there a way we might leapfrog to a future where we are as competitive as the developed nations without their social problems?"[ii]

His question confronts us with the most fundamental challenge: If approached in ruthless pursuit of economic growth, workforce development could widen the gap between rich and poor. The 1996 Human Development Report (UNDP) argues for avoiding strategies of economic growth that diminish people's opportunities to participate. At the same time, it is important to avoid strategies that "cause people's cultural identity to wither" (UNDP, 1996). Finally, the report points out the dangers of growth strategies that are "futureless," where the "present generation squanders the resources needed by future generations," particularly in the environment (UNDP, 1996).

A number of thinkers (Handy, 1994; Rifkin, 1995) suggest alternative ways of helping to ensure that people have access to participation in productive work, such as new social contracts between wage earners and those who provide "voluntary" service in the third sector. Although the issue of the future of work is beyond the scope of this study, a number of the cases highlight innovative strategies that bring disenfranchised, marginalized, and/or untapped workers into productive and fulfilling work. Taken together, the cases represent a set of promising possibilities for poor and rich nations alike, an honor roll of those who have accepted Jorge's challenge.

F. Current External Pressures Increasing The Demand For Workforce Development Investment

Where are the current external pressures increasing the demand for workforce development investment?

1. Employing the Exploding Population of Young Adults

A high percentage of the population in less developed countries is under the age of 25. By the year 2020, teenagers will make up the single largest population age-group in the world, more than 2 billion young people (Schwartz, 1991). Most will live in Asia, Latin America, and Africa. Many countries in these regions already face a large population of teenagers who are disaffected, marginalized, and poorly prepared for work—as for example, in Ghana, where young university students told EDC researchers that they saw no job prospects whatsoever in their future unless they found a way to create them on their own. The "Global Teenager," a term introduced in *The Art of the Long View*, predicts a complicated and shifting world of employment that makes concrete portable skills even more important for a productive life. In fact, Schwartz's scenario analysis of whether or not Global Teenagers will be "uneducated, unemployed, undernourished and in the end hopeless" turned on the critical uncertainty of the robustness of the world economy. Whatever the state of the world economy, these same teenagers will experience a barrage of advertising from the media, which show them

products they have no hope of ever obtaining (Schwartz, 1991). Unless the education and training needs of this group are met and they are moved into productive and sustained economic activity, the social and economic consequences of a disaffected generation could be disastrous.

2. Raising Productivity and Income in Agriculture

Well over half the world's working-age population live in low-income economies where annual income per capita was below $695 in 1993 (World Bank, 1995). Of those working (two-thirds of the population), many suffer from malnutrition, although almost 60 percent work in agriculture (World Bank, 1995). While the highly industrialized countries are trying to deal with agricultural surplus due to excess production, the agricultural practices in low-income countries cause many families to live at or below subsistence level. Helping families to grow food for themselves and the market and getting those goods to market in increasingly efficient and profitable ways have the potential to make a marked difference in the incomes and well-being of literally billions of people.

3. Assisting Workers During the Transition to Market Economies

Of the world's 2.5 billion workers, 1.4 billion live in countries struggling with transitions from state interventionism, high degrees of trade protection, or central planning (World Bank, 1995). From Eastern Europe to Asia, nations (the Czech Republic, Egypt, Senegal, Vietnam,

China, and many others) are privatizing state-owned enterprises, eliminating redundant workers in bloated public bureaucracies, and converting their economies to free enterprise. These revolutionary changes can wreak havoc on workers, labor market systems, and employment policies. In Argentina, Bolivia, Chile, and Mexico, real wages fell by more than a third during transition before recovering (World Bank, 1995). In some Eastern European nations, official unemployment has soared from almost none to 15 percent or more (World Bank, 1995). Equipping workers and employers to handle the changes brought about by transition through providing retraining, increased mobility and placement, and skills adjustment mechanisms is of critical importance if nations in transition are to survive the metamorphosis.

4. Ensuring Access and Equity to Close the Gap Between Rich and Poor

Addressing inequality in the distribution of assets, returns to assets, and the effects of discrimination is crucial to raising worker incomes and quality of life. Currently, 85 to 90 percent of the world's people possess just 11 percent of the world's wealth, and the gap is widening (UNDP, 1996). Ensuring equal access to economic opportunity often requires looking at factors entwined in workforce development investment, including social structures, the treatment of minority groups, and labor policy, and knitting together a solution that touches all areas. Access and equity are often extremely salient issues in cultures and industries where

women's economic participation is not traditionally strong but where women are increasingly faced with the challenge of being breadwinners.

5. The Changing Nature of Work

The way work is being done is changing rapidly, especially in highly industrialized countries. Many processes that were done in the past by human beings are now performed automatically—for example, by computer-instructed robots. Consider a contemporary oil refinery on the Texas Gulf Coast.[4] Just 15 years ago, many hundreds of workers—most of them with only rudimentary math and language skills—would have been busy maintaining the million or so miles of pipes, tubes, catalytic crackers, and converters needed to refine petroleum. Today, at any given shift, 20 workers patrol the refinery in jeeps, while another 50 or so spend their working lives inside a computer room the size of a football field. There they sit in front of computer screens that mirror every inch of pipeline outside. With one touch of the screen they can ask a piece of pipeline about its pressure, its temperature, and a dozen other factors. They don't really have to "work" in the traditional sense until a breakdown occurs somewhere outside. Then they work in multidisciplinary teams, weighing complex factors against each other to determine the best actions to take. Traditional vocational programs, according to refinery management, are no longer up to the job of preparing even entry-level workers, as the requirements for skills have changed drastically and schools don't have the funds for the technology required. Academic education programs are no better, as they do not

focus enough on solving problems in team settings. A similar situation can be found in virtually every high-technology workplace in the United States and in many developing countries. While industrywide skill standards would help, they are insufficient for norming workplace skills across national boundaries.

6. A "Globalizing" Economy

The petroleum company described above has refineries in several developed—and developing—countries throughout the world. The petroleum company's decisions whether to put a catalytic converter on "downtime," for instance, are reflected in the next day's stock prices and can affect the economy of many countries. Many customers and suppliers of multinationals are located in countries around the world, almost instantly connected to one another by e-mail, as in the case of Motorola's software developers, who in effect "work around the clock." As the U.S. workday closes, it begins for Motorolans in Asia, who pick up the work from their U.S. colleagues and develop it further before passing it on to colleagues in Europe. These relationships among workplaces cross boundaries of time, nations, and cultures. Workers in these settings often inhabit an economy and culture very different from those of the country in which they are physically located.[5] This situation raises potentially significant issues that have traditionally been the province of nation-states: compensation, laws, trade, and many others.

III. Investment Trends in Workforce Development

What should workforce development projects, programs, and strategies address? In response to the general external pressures discussed above and to local needs and contexts, workforce development investments should take into account a number of trends. In Section A we examine broad trends in workforce development as reflected in the case studies found in the Guidebook. In Section B we discuss a number of issues that must be considered as programs reach the implementation stage.

A. Broad Types Of Workforce Development

1. Upgrading Worker Skills

Skill requirements for formal sector employment in the year 2020 and beyond will be quite different from those in the past. Workers are being asked to take on more responsibility and independence on the job. In a sense, even entry-level workers have to be supervisors, as they supervise machines that do much of the work done by people in the past. The structure of the workplace is changing through organization into teams and elimination of layers of middle management, demanding that workers have new sets of interpersonal, team, and leadership skills never before required. This change necessitates that workers possess higher-order and analytic cognitive skills. These practices make the concept of a "job" less meaningful (Finegold, 1993) as we move from pay for jobs toward pay for skill portfolios.

Workers no longer have the security of "jobs for life" and often must move around through jobs that are related but different. This new mobility requires skills that workers can take with them and use in a variety of settings and situations. Such skills are even more important because firms are changing and adapting their processes to external market conditions faster than ever. Far from the past concept of single job categories with individual skill sets, the organization of competencies is being restructured into core skills for an industry (which are required for employment), with specialized company and position-specific skills being taught on the job. Even the nature of formerly repetitive work, such as that on a manufacturing line, is changing to incorporate practices such as "continuous process improvement" and "zero tolerance" for defects. These changes create an enormous demand for training and retraining workers to not only keep up with but also surpass employers' requirements and expectations for the employee of the next century. Our case studies of *PROIMI* (Argentina), *Telecurso* 2000 (Brazil), *RIBB* (China), *SEWA* (India), *Penang Skills Development Center* (Malaysia), *Building Trades Consortium* (Poland), *National Skills Development Fund* (Singapore), *Workers College* (South Africa), and *Miami-Dade Community College* (United States) all show how skills can be upgraded in a variety of contexts and cultures.

Investment in upgrading the capabilities of workers employed outside the formal sector, largely in the development of microenterprises and small businesses, focuses on skills training and access to credit so that

entrepreneur can maximize his or her income potential. Informal sector workers are equipped with entrepreneurial skills such as accounting, inventory management, and marketing. In addition, microenterprise projects provide skills training to improve the quality of products, such as advanced weaving techniques in the case of *SEWA* (India). Many successful microenterprise projects use former lendees as liaisons, trainers, and models for new entrepreneurs. Our case studies of *EMPRETEC* (Ghana), *AGETIP* (Senegal), *RMP* (Ukraine), *SENATI* (Peru), and *Zamorano* (Honduras) show the way in which smart investments in the skills of people who either are or will be self-employed can make a significant difference.

2. Supporting Small Enterprises in the Informal Sector

All over the globe, especially in lower-income countries, people make their own work—from fruit vendors in India to machine tool makers in Peru to hot sauce brewers in Ghana. In fact, half the world's workers are self-employed or work in small family enterprises. Whether we refer to this economic activity as *entrepreneurship*, *self-employment*, *small enterprise*, *microenterprise*, or *the informal sector*, we are talking about supporting and encouraging a type of work that is fundamentally different from wage sector employment. As these workers grow in size as a group, and as their economic activity heavily affects economies all over the world, their needs and special issues have come to the fore in policy and project formation.

Workforce investment in many countries, especially those with high percentages of workers in the informal and small-enterprise sector (which is often agriculture-based), has turned to supporting these businesses. The major components of this support often include one or more of the following:

- providing technical training on how to improve products and processes
- providing access to credit and cash for capital investment
- improving access to raw materials and other means of production (such as the reed needed for basketweaving)
- providing legal protections, especially because informal sector workers are often ripe for exploitation by middlemen and others who will jack up prices for raw materials or control the market through force
- encouraging access to other entrepreneurs to foster group support, collective bargaining, and buying and to provide a network for solving common problems
- improving infrastructure to help get goods from outlying areas to market
- providing access to technical training so that entrepreneurs can improve their skills and knowledge enough to meet free-market procurement requirements

The cases studies of *SEWA* (India), *EMPRETEC* (Ghana), *Zamorano* (Honduras), *SENATI* (Peru), *AGETIP* (Senegal), and *RMP* (Ukraine)

show how the factors listed above can be integrated into a highly effective workforce development program.

3. Shifting from Investment in Traditional Vocational Schools to New Models

The literature analyzing the successes and failures of investment in vocational schools (the focus of workforce development in the 1970s and 1980s) shows that market-oriented education and training, *not* traditional state-sponsored vocational schools, is usually the most cost-effective way to improve worker skills. In general, government delivery of training, especially through traditional vocational schools, has proved expensive and has not provided trainees with many marketable skills (World Bank, 1991).

The donor community has learned the same lessons. Traditional vocational schools have failed for myriad reasons:

- reliance on poor labor market and manpower forecasts
- unresponsiveness to consumer and market demands
- heavy bureaucratic weight
- excessive investment in physical plant at the expense of teaching and materials quality
- lack of incentives to engender competitiveness and thus improve quality
- inability to adjust to rapidly changing work and economic conditions

- inadequate or nonexistent linkages with employers
- weak management
- weak implementation capacity
- heavy reliance on single sources of funding
- lack of good programs

This widespread failure is largely responsible for the pullback from this type of workforce development investment in the 1980s, and none of the cases included in the Study and Guidebook features a traditional vocational training school or center. Instead, resources have moved to funding market-oriented, informal training centers and innovative programs such as those described in the cases *Zamorano* (Honduras), South Africa's *Workers College*, Ukraine's *Retraining of the Military Program*, and Malaysia's *Penang Skills Development Centre*. The state-supported vocational schools in Germany's *Dual System* and those being developed by the *RIBB* in Shanghai teach state-of-the-art knowledge by being closely linked to the needs of employers and organized labor. The training centers found in each Peruvian province (*SENATI*) are considered highly effective because curriculum development and teaching are closely linked to the needs of employers. The vocational school that students attend as part of the *Integrated Recruitment and Training Program* (*IRTP*) in the Philippines is improving its practices as the Ayala Foundation brings employers and trade unions together with school and government officials to discuss the development of effective training programs. The close relationships that *Miami-Dade Community College* has with area employers keep students and faculty skills up to

date. In short, successful traditional vocational programs and the more recent informal training centers and university programs are most effective when they:

- cultivate and sustain strong linkages with enterprises at multiple levels
- offer a mix of short- and longer-term courses with curricula based on occupational analysis
- constantly redesign training curricula to meet emerging consumer and market demands
- respond flexibly to changing labor markets, especially locally, rather than trying to anticipate them
- cultivate alternative financing
- offer salaries and incentives sufficient to attract and retain qualified instructors
- are required to work through mechanisms such as training vouchers or bidding to acquire training rights or receiving funds on a cost-recovery system based on achieving high graduate placement rates (or other measures); such mechanisms help ensure that training institutions create programs of excellence through competition, incentives, and meeting of standards.

School and informal training center investments that follow these patterns have met with more success than traditional vocational training schools. Case studies of successful school-model and informal training programs include *Zamorano* (Honduras), *Miami-Dade Community*

College (U.S.), *Workers College* (South Africa), *Penang Skills Development Centre* (PSDC), *PROIMI* (Argentina), and *Telecurso 2000* (Brazil).

4. The Rise of National Training Systems

Vocational education and training investment did have some striking successes, chiefly the development of national training systems in middle-income countries. Western European and South American nations have led the way in creating national training systems (Middleton & Demsky, 1989). The most famous examples are the German *Dual System* and *SENAI* in Brazil, both of which have been imported in whole or in part by many other nations. Although these national training systems are considered highly successful, their scope brings about other pitfalls. Take the case of Germany, at one end of the extreme, where it takes a long time to introduce innovation and change into the system because the system is so highly structured. All stakeholders must agree to the change. This stands in sharp contrast to the case of *Miami-Dade Community College* (*MDCC*) at the other end of the spectrum. *MDCC* can quickly innovate and change. However, American community colleges differ enormously in quality, and there is no system by which innovations introduced at *MDCC*, for example, can quickly spread to any of the others. This lack of a system creates economic inefficiency, as each college must fund its own research and development activities and employers or other funders have no way to determine how the quality of

graduates from one institution's program compares to that of similar programs in other institutions.

Many of the national training systems extend from the end of basic schooling (anywhere from age 10 to age 16) and move students into industry-based training. While differing in detail, most successful national training systems have a similar basic design:

- They pool funds from employers (and, where relevant, organized labor) and state to provide resources for training.
- They leverage additional resources, such as time, expertise, information, and networks, to develop and maintain some form of up-to-date occupational profiling or national standards for skills.
- They structure (either informally or formally through law) the relationship among stakeholders (employers, schools, youth/adults, training providers, organized labor and trade associations) such that each has a specific role in the system and each is held accountable for doing its part.
- Neither schools nor employers that provide training evaluate their own performance. Instead, evaluation and credentialing are left to an outside, impartial body (such as a Chamber of Commerce) that evaluates the training by means of examining student performance.
- Government typically acts as a neutral broker-convenor and often provides incentives for employers to train.
- They continuously improve the quality of the system by sharing information about demand and supply, as well as conducting periodic

benchmarking in other countries to identify what works and what does not.

- Many include apprenticeship or other on-the-job components as part of their requirements. Certification in an occupation, trade, or industry follows demonstration of mastery of skills and fulfilling of program requirements.

Our case studies of *Chile Joven* (Chile), *SENATI* (Peru), *the Dual System* (Germany), *the National Training Fund* (Czech Republic), *National Skills Development Fund* (Singapore), and the *Australian National Training Authority* (Australia), provide a rich array of ways in which national training systems can be successfully structured. However, attempts to create national training systems in lower-income countries have not worked as well. Investments in low-income nations, especially in Sub-Saharan Africa, have been less successful because they (Middleton & Demsky, 1989):

- focused on single small projects that often lacked institutional capacity investment or adequate research work
- suffered from a small modern industrial sector and stagnating employment growth
- undertook planning based on inaccurate manpower forecasts
- had little success in finding alternative financing measures
- made little investment in quality improvement practices
- were relatively inflexible in the face of changing economic conditions

In general, the effectiveness of training systems stems from a core of successful practices and the ability to mold them to fit the needs of economies at different levels of development. A program to create training systems in low-income countries will address different training needs and encounter different constraints from those in middle income countries. Of the case studies in low-income countries, *IRTP* (the Philippines), *EMPRETEC* (Ghana), and *AGETIP* (Senegal), *EMPRETEC* and *AGETIP* are in a position to lay a foundation for a national training system. However, they still have far to go, as "official" and at times less than transparent government policy and practice must change before any national training system can be considered.

5. The Development of National Industrywide Skill Standards

Faced with paying for an exploding tangle of second-chance retraining programs, no uniform criteria for evaluating quality, and students who drop out of school because they don't know how their learnings are relevant, many highly industrialized countries have developed or are developing national skill standards. Such standards will help youth, training providers, educators, and employers to understand what skills are required for successful entry into a given industrial sector, such as construction, electronics, or biotechnology. Developing national skill standards is a daunting task, and many countries at all stages of advancement are struggling with how to link technical workplace skills to the employability skills considered so critical by employers (learning

how to prioritize, communicate effectively, learn, think, and act at work).[6]

While the technical problems associated with developing industrywide skill standards can be resolved, the human political issues are far more difficult to work out, as employers often want narrowly framed skills, while schools, trade unions, and other stakeholders want more broadly conceived skills that allow workers mobility across occupations (Aring, 1995).[7] Most of the successful standards have been developed by means of an extensive political process of compromise and consensus building so that all the stakeholders can "own" the standards. In this process, standards are developed by analyzing a given occupation (or group of occupations) and breaking it down into its elementary operations. Those operations are then applied to a sequence of practical projects that increase in difficulty and build in skills over time. Finishing the last project demonstrates mastery of all the skills (Aring, Leff, & Malyn-Smith, 1995). Students often spend an equal amount of time studying the nature of the task, reading about it, writing how to do it, and preparing to execute it. Students are trained in workshops and special schools for these technical career tracks.

Our case studies of the *Dual System* (Germany), *Australian National Training Authority*, *PROIMI* (Argentina), *RIBB* (China), and *Building Trades Craft Union Training Consortium* (Poland) demonstrate the range of ways in which skill standards can be constructed. In these studies, China's *RIBB* is in the embryonic stage of developing skill standards for

the province of Shanghai, while Germany's *Dual System* represents the most fully worked-out standards and curricula. The *Australian National Training Authority* has developed national skill standards for the entire education and training system; however, these are only a few years old, and it is not clear that the new, conservative government will continue to support what has been a movement catalyzed by the previous labor government. Poland's *Building Trades Craft Union Training Consortium* uses U.S. standards for the construction trades—an industry that in the United States has to meet many standards for safety. *PROIMI* uses professional standards developed in the biotechnology industry. All these case studies offer rich examples of how skill standards support a more efficient development of skills and knowledge in the workforce and the very real challenges that have to be negotiated in the process.

6. Lifelong Learning

Traditionally, training has been the province of the young. The formal education system in most countries lasts only to about age 16—in many nations even less—and after that either finding a job or moving into post secondary education is solely the responsibility of the young person. These late teenage and early twenties years have been the prime training years, when the worker learned what he or she needed to know and then went off to work, picking up any new information on the job but never returning to formal education and training. Yet many enterprises and projects, from Motorola University's participation in Malaysia's *Penang Skills Development Centre* to the *Workers College* in South Africa, have

recognized that the need for learning and training extends beyond these traditional preparation years. With the fast pace of change in both technology and the processes of work, workers need to upgrade and expand their skills throughout their lives. Thus, many employers and community institutions have begun offering training, retraining, refreshers, short-term skills upgrading, and porting of existing skills to new jobs. This extension of the expectation of when training should take place has opened up new avenues for workforce investment that better address the changes in work and training needs throughout the life cycle.

One of the classic examples of training institutions that support changes throughout the life cycle are American community colleges, as demonstrated in the case of *Miami-Dade Community College* in Miami, Florida, prepared by EDC. MDCC's student body is diverse in ethnicity, culture, and age. While the average age is 26, 23 percent of students are over the age of 30. MDCC boasts outstanding linkages with employers and is known for its responsiveness to labor market trends. Community partnerships, dynamic and responsive curriculum design, skilled instructors, diversity, in-depth community needs assessments, and continuous improvement performance indicators are the hallmarks of a school that trains paraprofessionals for certification, bachelor's degree candidates, and single-course students looking to improve their skills. Many of the other Education Development Center case studies show how workers can be supported at a variety of life stages, including *Telecurso 2000* (Brazil), *Workers College* (South Africa), *RMP* (Ukraine), *SEWA*

(India), *SFD* (Egypt), *PSDC* (Malaysia), and the *Czech National Training Fund.*

7. Targeting Special Populations

For economic as well as equity reasons, workforce development often targets specific population groups, such as women, ex-combatants, disenfranchised youth, and the disabled. In projects that address special populations, the population has often been targeted because of some set of factors that have limited participation in the workforce.

The examples of targeted programs are as numerous as the special populations. In many Eastern European countries, the disabled have long been institutionalized. With decentralization and new practices from economic and social restructuring, these countries have found that they lack ways to effectively integrate and train this population. Women are often the target of workforce development investments, especially when they are single heads of households or socially disadvantaged, as is true in the *SEWA* and *IRTP* case studies presented by EDC. In countries with recent civil wars, the reintegration of ex-combatants into productive economic lives has taken top priority. In others, where military downsizing is reducing the workforce, projects such as the *Retraining of the Military Program* in the Ukraine are seeking to help ex-officers and their families adapt to civilian life and translate their skills to private, market-based economy employment (EDC case study). Many nations, such as Chile, confronted with a growing population of poor,

marginalized, and undereducated youth, are responding through projects like *Chile Joven*, which trains youth ages 14 to 24 to start microenterprises or to enter jobs in the manufacturing sector (EDC case study). In all these cases, project success is bolstered by tailoring training to the needs and life situations of the target group, such as providing child care while mothers train or employing training methods that bring immediate economic benefits through wages or the creation of salable goods during the training period. Thus, special investments addressing the history and life circumstances of target groups are being made to bring these populations into productive work activity.

8. The Importance of Technology and Enterprise-Based Training

In their report *Enterprise Training in Developing Countries*, Tan and Batra (World Bank, 1995) point out that most external training occurs in the private sector, where technology shapes the skill requirements of employers. Training in the private sector, they add, "generates new skills and knowledge that are embodied in employees that make them more valuable to employers than comparable workers elsewhere." They conclude that "policies to encourage increased enterprise training will have large productivity and efficiency gains for the economy and have strong complementary relationships to education, and sustaining future economic growth." Enterprise training is a strong feature in several of EDC's case studies, including the study of Germany's *Dual System*, Singapore's *Skills Development Fund*, Peru's *SENATI*, Ghana's

EMPRETEC, Senegal's *AGETIP*, Malaysia's *Skills Development Centre* in Penang, Chile's *Chile Joven*, and *IRTP* in Manila.

B. Implementation Issues In Workforce Development

1. Supporting the Informal Sector

Despite the fact that half the world's workers are self-employed or work in family enterprises, the needs of this "informal sector" are largely unaddressed. Although 90 percent of developing countries have some form of social security, these systems cover only those employed in the formal sector, workers who make up just 15 percent of the labor force in low-income countries (World Bank, 1995). Many nations, especially low-income ones, are turning to microenterprise development loans, technical assistance, and training to create a cadre of innovative entrepreneurs in industries from construction to basketweaving to hot sauce. Broadening the skills and capabilities of this half of the world's workforce in both vocational and managerial arenas holds enormous promise for increasing incomes and productivity.

2. Respecting and Preserving Cultural Integrity

Some multinational employers, such as Motorola and Siemens, make a point of understanding the cultures of the countries in which they are doing business throughout the world. This practice requires them to spend additional resources in "reinterpreting" curricula, training

approaches, management styles, and incentives. For example, Motorola has funded a multimillion-dollar center for applied intercultural research and development. This center goes far beyond the traditional practice of translating training materials. Instead, it reinterprets training approaches and materials to fit the culture of the country. In Malay culture, for example, women are not encouraged to assume strong, leadership roles and traditional Western training materials and approaches do not seem to work in that culture. The center has retained the services of some of the world's leading intercultural experts to develop approaches that will bridge the culture of the country with that of the corporation (Aring, 1994). Many other employers in developing countries do not make this kind of investment. This can lead to a work environment that does not respect the cultural identity of workers, which in turn can lead to a loss of self-esteem, exploitation, and decreased civic participation (UNDP, 1996).

3. Investing Wisely

The World Bank has concluded that "expenditures on human resources often fail to provide the quantity, quality, or type of human capital that it might have if the funds had been better spent" (World Bank, 1995). The World Bank details examples of these poor investments: excessive spending on education bureaucracies and school facilities, rather than on teaching staff and materials; failure to set high standards for students and provide the means to achieve them; emphasizing postsecondary over primary and secondary education; and teaching skills that don't match

market opportunities. With resources, especially capital, tight, it becomes even more important to direct funds properly.

4. Developing a New Language to Describe Knowledge-Based Work in the Formal and Informal Sectors.

Industrial Age language associated with Taylorist mass production practices, wherein work was chunked into bits so that a worker would perform the same repetitive task hour after hour, does not map onto knowledge-based work. Numerous researchers and policymakers, including Berryman and Bailey, 1995; Finegold, 1995; Ulrich and Greenfield, 1995; Aring, 1993; and many others have concluded that terms from the Industrial Age cannot be mapped onto the knowledge-based work of the twenty-first century. For example, consider the terms *vocational*, *technical*, *applied learning*, and *training*. These terms are artifacts from the heyday of the Industrial Revolution, when learning and work had little to do with each other and work was organized along Taylorist principles. Although most industrial workplaces in the developing world still reflect Taylorist approaches (wherein each worker performs the same repetitive task day in and day out), the high-wage jobs of the future require higher-order skills that come from applying academic knowledge to breakdowns in complex systems. Purely academic or theoretical learning does not provide people with the skills to solve such problems (*America's Choice, High Skills or Low Wages?* 1990; Aring, Leff, & Malyn-Smith, 1995).

Similarly, successful self-employment requires the *integration* of knowledge and skills derived from education, training, personal experience, and participation in networks. While some investors in workforce development projects are recognizing the inadequacy of industrial language, many others still assume that one type of learning (academic or vocational) is superior to another. Both are beginning to recognize the importance of "core skills", such as learning how to learn, think, plan, budget, and solve problems.

5. Improving the Flow of Information by Linking Education and Training to Employer Needs

For workers to move easily into jobs and from job to job requires communication between training institutions and employers on what skills are required of workers. If a breakdown occurs in the exchange of this information, workers are not trained in what employers need, employers don't get workers with the required skills, and productivity and incomes suffer because workers can't do what is required of them. In severe situations, employers find themselves with a serious shortage of skilled labor and whole economies can feel the impact of poor information flow. Starting or improving this flow of information often involves heavy industry participation in benchmarking best practice and design of curricula. By ensuring that employers and educators communicate directly and clearly about what is required for workers to be prepared, we smooth the transition from training to work and vice

versa and ensure that workers can be immediately integrated into the workplace.

Labor markets have demand and supply sides. Firms and consumers create demand for workers; the education and social system provides a supply of people to become workers. However, both sides of this market rarely operate in close concert, chiefly because of poor flow of information between the demand and supply sides. To better understand how this flow becomes and remains disjointed, consider an opposite example—a case where the two sides of the market do function well, in the preparation of physicians in the United States. In this system, hospitals, private practices, clinics, and people in need of medical care create a demand for trained doctors. Medical schools prepare individuals to fill these job slots. The supply of newly trained doctors flows easily into open spots created by demand. Why? Because the trainers that control the supply side are in close contact with employers about what skills and experience new doctors should have. The suppliers then stringently prepare doctors to meet these requirements and pass the certification exams, which are set by employers, professional associations, and government agencies. Because graduates must meet standards set by all the stakeholders in the system, employers have confidence that the new doctors they hire who have been trained in this system know what they need to know to do the job properly.

Many labor markets do not operate in this smooth manner. In fact, often little communication exists between the suppliers (usually schools and

other education and training institutions) and employers about what workers need to know. Thus, employers have little confidence that the people they hire from many schools are ready for the work to be done in their workplaces. Remedying this lack of information and articulation is the goal of many projects working at the macro level in policy and administration of training systems and a subgoal of many direct training projects with heavy employer involvement. Often projects that address this goal will use tools such as developing skill or occupational standards, involving business heavily in curriculum design and project administration, and/or hiring trainers directly from industry.

IV. "What Works": Findings in Best Practice

In Section A below, we analyze across case studies to highlight the practices and principles that have helped projects succeed. In Section B, we examine the most promising roles for governments, donor organizations, private sector investors, NGOs, policymakers, and USAID missions.

A. Analysis Of Case Studies

1. Leadership and Accountability: Philosophy, Values, Strategies, and Standards

A detailed discussion of philosophy and values, such as transparency and public accountability, as well as strategies and standards, can be found near the beginning of each case study. The following discussion focuses on a few key values, strategies, and standards that are central to the case studies.

1.1 Developing the Workforce and Economic Growth.

A central value embedded in every case is the premise that developing the workforce has a positive impact on the economy by improving the economic condition of the individual. Although strategies and standards differ in each case, they are always as inclusive as possible when they reach out to people who most need support. At the same time, each case

relies on clear standards that guide its own practice as well as the practice of the target population and, in some instances, stakeholders.

1.2 Transparency and Public Accountability

These values are central to all of the cases and play a key role in helping to build public trust, equity, access, and the social partnerships among stakeholders required for good workforce development programs. The case study of *AGETIP* in Senegal is a powerful example of the importance of transparency and public accountability in developing countries making a transition to a market economy. Prior to *AGETIP*, the country's public sector was the only employer, one whose practices were considered neither transparent nor accountable to the public. The case studies on the *Dual System* in Germany and *Miami-Dade Community College* in the United States, both highly industrialized countries, show how transparency and accountability frame the social partnerships among stakeholders.

1.3 Learning by Doing

Another value found in every case is the belief that learning by doing is more useful than learning by reading about something or discussing it without actually doing it. In all the cases students or trainees learn in experiential ways, by participating in activities directly applicable to situations encountered in the workplace. Learning by doing requires respect for all types of education, including vocational, or applied, education. This finding in best practice abroad coincides with conclusions of the education reform movement in the United States and

elsewhere. Cognitive psychologists and educators recognize that behaviorist models of education, wherein knowledge and training (like mass producing under Taylorist principles) are chunked into bits to be assembled into a whole at some future date, do not work, as they do not reflect how people learn. The current view among learning experts is that constructivist learning, wherein learners construct their own meaning in the context of doing work (in school or at the workplace), more accurately fits how people learn. Respect, or equal status, for all types of learning is best reflected in the case of the *Dual System* in Germany, where youth can learn difficult abstract constructs, such as solving differential equations, in the context of training in the metalworking industry, coached by workplace "meisters." These master workers, who have become credentialed teachers, guide youth to frame and then solve problems at work. Equal respect for vocational and academic education is also a central value of the *Australian National Training Authority* and Shanghai's *RIBB.* One of the most vivid examples of embedding vocational education and training into academic learning can be found in the case study of *Zamorano,* where youth learn by doing projects that range from genetics to veterinary medicine to mucking out a barn.

1.4 Systems Thinking

Thinking systemically in ways that allow the stakeholders in the system to learn from one another is another central value found in each case. While it is most recognizable in the National Training Systems of Germany, Singapore, Australia, and fledgling China, leaders in each of

the cases think and act systemically—linking with stakeholders and learning from one another to improve performance.

1.5 Customer-Oriented Learning

Another basic value in many cases is helping people to learn skills they want to learn because they see how they will benefit from having those skills. This value can most readily be seen in the cases featuring *Telecurso* (Brazil), *SEWA* (India), *IRTP* (Philippines), *AGETIP* (Senegal), *EMPRETEC* (Ghana), *Workers College* (South Africa), *Retraining of the Military Program* (Ukraine), the *Dual System* (Germany), and *Zamorano* (Honduras). For example, *SEWA*'s high success rate can be attributed to the motivation of its target population - the poor women of Ahmedabad, India. *SEWA*'s target population, its "customers" want to be economically self-sufficient, and they support the organization even after they have become trained because *SEWA* continues to advocate on behalf of their evolving needs.

2. Demand-Driven Design

One of the reasons traditional approaches to workforce development (manpower studies, vocational training centers) have failed is that they have not been tied to demand in the international, national, regional, or local economy. Typically, traditional approaches have been unable to respond in time to gaps between the demand for and the supply of skills, a situation that resulted from a market failure such as poor flow of information All the cases promote the flow of information among

stakeholders, and this flow is further analyzed in Section 6 below, on public-private partnerships.

2.1 Customer-Driven Learning

All the cases are based on an analysis of needs in the local, regional, or international market, and all link this analysis of needs to developing the skills of target populations. Many cases provide examples of "customer-driven" learning strategies, where pedagogy is specifically designed to fit learners needs.. Appropriate training methodologies range from using visual media for illiterate populations in *SEWA* to television as the distribution mechanism in Telecurso 2000 to hands-on agriculture in *Zamorano*. Surveying the target population's requirements for both content and training format, and then designing programs that fit these requirements are critical steps to ensuring participation and relevancy. Outstanding examples of tailored training content and methodology can be found in *Telecurso 2000* (Brazil), Zamorano (Honduras), the *Dual System* (Germany), *RIBB* of Shanghai, the *South African Workers College*, *EMPRETEC* of Ghana, *SEWA* in India, *PSDC* (Malaysia), and the *Retraining of the Military Program* in the Ukraine. Several cases, such as the *Dual System* in Germany, *PROIMI* in Argentina, *Zamorano* in Honduras, and the *Singapore Skills Development Fund*, go beyond being market-led. These cases show how a workforce can be developed to first achieve and then maintain market leadership in a particular area, such as high technical quality or high productivity.

2.2 Tied to the International Market.

Cases that prepare people to meet the demand for skills in the international economy include Argentina, Australia, China, the Czech Republic, Germany, Honduras, Malaysia, Poland, and Singapore. These cases each provide rich examples of how they are tied to the international economy. Moreover, many of the employers that are stakeholders in these cases are certified to ISO (International Standards Organization) 9000 requirements[8] which means they have established training and production processes that help guarantee quality as established by each participating nation's standard-setting body. We have selected the cases of Australia's *National Training Authority* (*ANTA*) and Honduras' *Zamorano* to analyze how, despite their vast differences in scope and scale, both are tied to the international market as they:

1. recognize that the future economic success of their "graduates" depends on performing successfully in work that is likely to come from other countries, as the domestic market for their skills is too small
2. benchmark best practice abroad and develop standards for student performance based on their findings, although in very different ways
3. consider themselves to be a source for developing competitive advantage in the region surrounding their country (Australia sees itself as a gateway and source of expertise to Southeast Asia, while *Zamorano* views itself as a source of supply of skilled expertise for all of Latin America and beyond).

2.3 Tied to the Domestic Market

Programs producing people whose skills meet local, regional, or countrywide demands include cases in Brazil, Chile, Egypt, Ghana, India, the Philippines, Peru, Senegal, South Africa, the Ukraine, and the United States. Many of these cases have well-established systems that meet a recognized demand for skills, such as Peru, Brazil, and India. The others are fairly new and are at various stages in the process of linking themselves to their stakeholders to ensure the flow of information and support that is vital to meeting market demand for skills and knowledge.

3. Open Access

Access to the project, program, or system is closely linked to transparent criteria for entry and exit. Access - and the information and practices that provide access - should generally be available to populations who often in the past have been excluded from participation in productive work. These include women, girls, the handicapped, and otherwise disadvantaged populations. Some economists believe that entry and exit costs should be low to allow for greatest participation. However, if the "stakes" are too low, learners are unlikely to want to participate in the system, project, or program, as expectations play a key role in learner performance. For example, women learning weaving by participating in *SEWA* in India know that their future livelihood is at stake if they don't learn the skills required for the job of weaver—traditionally a male occupation. Similarly, discharged military officers in the Ukraine know

that they face a bleak future if they don't acquire skills they can use in their country's new market economy. On the other hand, "raising the stakes" automatically raises barriers. Finding the balance between these two poles is a useful tension in successful workforce development systems. Examples of highly accessible projects, programs, or systems that also feature high stakes and high degrees of success include Germany's *Dual System*, Argentina's *PROIMI*, Honduras' *Zamorano*, Malaysia's *Penang Skills Development Centre*, Poland's *Building Trades Craft Union Training Consortium*, and Senegal's *AGETIP*. A closer look at *Zamorano* in Honduras, and Germany's *Dual System* reveals some useful data about how to balance the tension between high expectations and high stakes and open access: For example, in virtually all of the cases, youth and adult learners have to demonstrate their capacity to perform in the program whose requirements for entry are clearly spelled out. To enter *Zamorano*, youth must pass a rigorous entrance exam. To enter the *Dual System*, they must show good school performance and be able to enroll an employer to take them on as a youth apprentice. More highly respected employers require youth to pass through other hurdles, as competition for learning at such workplaces is very high. Youth know the higher quality training available with these employers raises their chances of finding employment at the end of their apprenticeship period.

3.1 Transparent Criteria for Entry

Youth and adults who wish to participate in any of the programs featured in the case studies know exactly what the criteria for entry are, and they

have a good idea about what successful completion of the program will mean for them. For example, youth who participate in *Chile Joven* know that before entering the system they must have completed basic education and have obtained the commitment of an employer to train them. Similarly, in most of the cases the other stakeholders also know what the criteria for entry are and what their roles in the system are. For example, *AGETIP* in Senegal publishes its criteria for bidding in a request for proposals (RFP) and encourages would-be bidders to be trained by approved trainers on how to prepare a successful proposal. Youth and their teachers in Germany's *Dual System* have visited several employers for one or two weeks of shadowing before selecting a particular industry and employer for learning their occupation. They have also spent the equivalent of several days at their city's labor market info center, where they take aptitude tests, "shadow" jobs by means of multi-media CD-ROM's, and research careers that look interesting in order to find out what the criteria for entry and exit are and what successful completion of training would yield them.

3.2 Resources for Special Populations

Although they use very different means, many cases seek out those groups who have not traditionally participated. Once in the program, special populations are supported with additional help to the extent that it is required. In *Zamorano*, women students are encouraged by faculty to assume leadership positions in various teams and to some extent are mentored by female faculty members. Students who are disadvantaged

due to social problems and certain physical conditions often have difficulty finding a training place with an employer in the German *Dual System*. These youth can and do participate in special dual system training centers that take the place of employer-based learning while the youth continue going to school with other students in the regular dual system. The best of these training centers allocate up to three full-time adult teacher/mentors to a group of 6 to 10 youth so that they learn the academic, technical, and social skills necessary to pass the final exams at the Chamber of Commerce (Hamburg's Program for the Disadvantaged).[9] Senegal's *AGETIP* makes a special effort to help one or two-person enterprises succeed in costing out work, finding and training workers, and managing construction schedules. *ANTA* (Australia) makes a point of bringing many special populations, including the disabled, into the national training system. *Miami Dade Community College* is widely recognized for its success with special populations.

3.3 Competency-Based Learning,

The concept of competency-based learning, as in learning modules that can be repeated as often as an individual needs, is opposite to learning that is measured by time in one's seat in class. Many of the cases deliver curriculum materials in modules that, in some instances, can be repeated as often as necessary so that the learner meets the required competencies. For example, youth can go through the *Dual System* free of charge twice; *AGETIP* trains people until they meet requirements; and Polish

construction workers practice a specific skill until their performance meets standards.

3.4 Training That Meets Trainees at Many Levels

Projects such as *Telecurso 2000*, *SEWA*, *PROIMI*, *Workers College*, *Miami-Dade Community College*, and *PSDC* have structured their training so that it provides multiple entry points for workers and multiple ways for them to access the training they need. Options include creating opportunities to make varying levels of commitment to the program, to take pieces or whole sequences of training regimes (short-and long-term), and providing targeted packages of training for specific demands. A Brazilian worker in a shoe manufacturing plant, for example, may elect to complete an entire six-month course in a monitored *telesala* to upgrade his technical skills, or he could simply view one unit of the course in his home, using the accompanying textbook. By meeting workers "where they are" and providing a menu of opportunities for skills upgrades, projects are extremely flexible and open to an array of workers and situations.

4. Portable Skills

Skills should be portable in two very different domains.

4.1 Portable Across Geographic Boundaries

At the very least, successful workforce development projects should allow for some geographic mobility, as jobs or work opportunities may

not be physically close to where learners have acquired their skills and knowledge. Truly international portability can be found in the cases of *PROIMI* (Argentina), the *Dual System* (Germany), *Penang Skill Development Centre* (Malaysia), *Zamorano* (Honduras), *EMPRETEC* (Ghana), and *Australia's National Training Authority*. National portability of skills can be found in the cases of *Telecurso* (Brazil), *Chile Joven*, *RIBB* (China), *Senati* (Peru), *AGETIP* (Senegal), *South African Workers College*, the *Retraining of the Military Program* (Ukraine), Singapore's *Skill Development Fund*, and *Miami-Dade Community College* (Unites States). The *Integrated Recruitment and Training Program* (Philippines) and *SEWA* (India) are the only two examples providing local or regional portability of skills.

4.2 Portable Across Occupations

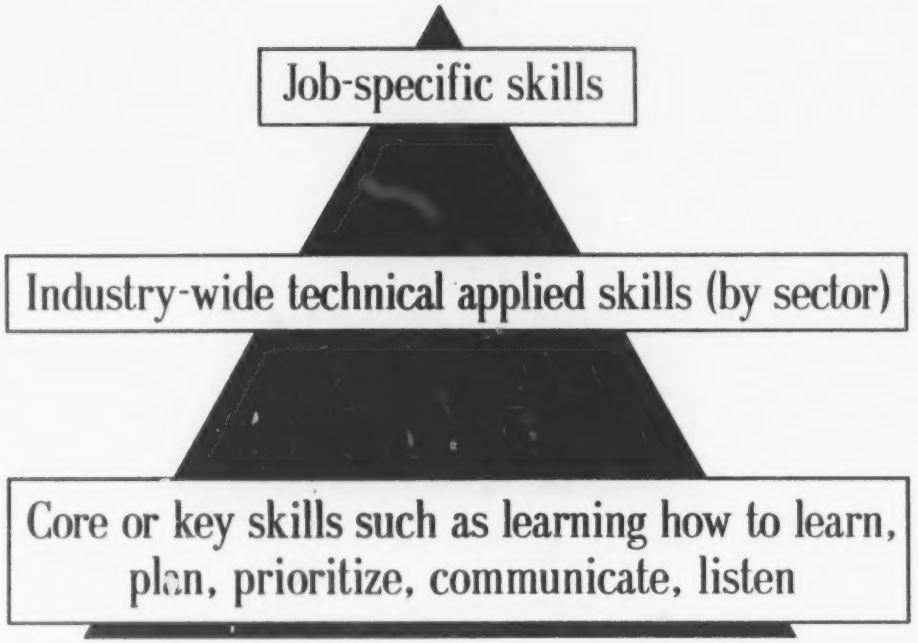
Increasingly, members of the research and policy community in the highly industrialized countries are calling for identifying and standardizing skills across occupations but within occupational clusters (United States Department of Labor Conference, 1995). This call is in response to the changing nature of work (discussed earlier in this study), as well as the fact that most people will change jobs and careers many times during a lifetime. There is currently much debate in expert communities about the importance of generic, or core, skills. Such skills are called the SCANS skills in the United States (Secretary's Commission on Achieving the Necessary Skills, 1993) and "Schluesselqualifikationen" (key skills that unlock other skills) in Germany. These skills center on what are traditionally considered

employability skills, such as learning how to learn, plan, communicate effectively in a variety of media, budget, problem-solve, and generate alternatives. The illustration on the next page shows the pyramid structure whereby the key skills run along the base of the pyramid, the industrywide technical skills occupy the midsection, and the job-specific skills are at the apex. Case studies in which people develop highly portable (across occupations) as well as technical and job-specific skills include *Miami-Dade Community College*, the *Czech National Training Fund*, *EMPRETEC*, *AGETIP*, the *Dual System*, *Zamorano*, and the *Australian National Training Authority*.

Moreover, traits such as leadership, flexibility, curiosity, and "coachability" are skills that are even more portable than the generic employability skills discussed above. Several projects are designed to promote the development of such traits, including South Africa's *Workers College*, India's *SEWA*, the Czech *National Training Fund*, Singapore's *Skills Development Fund* and *Zamorano* in Honduras.

5. Continuous Improvement

Continuous Process Improvement (CPI) is a term borrowed from the Total Quality Management movement (TQM). It is one of the most basic tenets of that philosophy and requires a commitment to continuously improve practice through measuring and evaluating throughout the production process, instead of waiting until the product or service has been recast to improve quality. To perform CPI well, one can employ a number of practices, many of them based on some form of


Job-specific skills
Industry-wide technical applied skills (by sector)
Core or key skills such as learning how to learn, plan, prioritize, communicate, listen

The Skills Pyramid

statistical process control (SPC), wherein performance statistics are generated throughout the production cycle in order to improve processes. Few, if any workforce development programs examined for this study used sophisticated, continuous process control systems to monitor performance. Much work needs to be done to design integrated software systems that could capture uniform data from a number of different stakeholders, many of whom typically have different reporting requirements. However, most projects used two general types of improvement practices to monitor and evaluate performance at various points in time.

5.1 Informal Improvement Processes (Internal Assessments)

Each of the 20 cases that were selected to represent best practice places a high premium on various forms of continuous improvement. In most of the cases, this is done informally, by surveying the different stakeholders through benchmarking and adjusting training offerings according to emerging needs. A careful review of the case studies reveals the enormous diversity of ways in which processes can be improved. However, central to all is the idea that processes are measured in some way, and improved throughout the life cycle of the project, program, or system by all the stakeholders, not just an outside evaluator.

5.2 External Evaluation

Outside evaluation appears to be irrelevant in the cases that feature proven national training and education systems, such as those in Germany, Australia, and Singapore, where the stakeholders continuously

monitor system performance. Interestingly, these are the systems that appear most interested in being benchmarked, or compared for best practice, as they often have no outside look at how they are doing. External evaluation appeared much more prevalent in projects funded by the World Bank and other major donors, who often require reports as often as every six months before releasing more funds. This is the case in Senegal's *AGETIP*, Shanghai's *RIBB*, which is scrutinized annually by the German Agency For Technical Assistance, and the *Czech National Training Fund*, whose performance is carefully checked by program officers in the European Union. External Evaluation is least evident in cases where a local institution has funded the development of a new project, such as the Philippine's *IRTP*, where, except for the high motivation of project staff, there appears to be no real pressure from anyone within the system to improve the process.

6. Public-Private Partnerships

Developing multiple partnerships that bring together resources from the private and the public sectors appears to be the most sustainable approach for workforce development initiatives.

6.1 Public and Private Sector Partnerships

A key success factor for effective workforce development systems is the degree to which the project, program, or system links the demand side of the labor market (employers or entrepreneurs) with the supply side (learners of all ages). The supply side is often but not always in the

public sector, as in the case of proprietary schools such as *Zamorano*. Similarly, the demand side is not only in the private sector, as in some cases the public sector is an important source of employment. Linking the public sector to the private sector in workforce development creates a system throughout which it is possible to achieve consistency, consensus, cost sharing, accountability, accessibility, and continuous improvement. Each of the cases selected for best practice links the public and private sectors in some way, although such linkages are more difficult in countries who are making the transition to a market economy where the private sector is underdeveloped.

6.2 Multiple Stakeholders

The most successful workforce development projects, programs, or systems cross the boundary between typically isolated institutions—such as publicly funded schools, employers, employer associations, and organized labor—and link these institutions to each other and to the project. This is a part of system building and systems thinking (Senge, 94) and is critical to success, as all the actors in a successful project must have something at stake. All should win if the program works, and each should lose something if it does not. The importance of multiple stakeholders as part of a public-private partnership is perhaps best illustrated by the cases of Germany's *Dual System* and Australia's *National Training Authority* (*ANTA*). Australia's system is unique in that it brings together all the stakeholders—including state, territory, and commonwealth governments; vocational education and training authorities; industry and Industry Training Advisory Bodies (ITABs);

unions; and employer associations—into a framework to provide national consistency. The guiding philosophy behind *ANTA* is to develop a cohesive, nationally consistent structure for education and training by bringing together numerous organizations and interested parties to develop appropriate standards, policies, and frameworks. This cooperative effort is directed toward achieving a world-class training system responsive to all clients and their training needs. Likewise, Germany's *Dual System* brings together employers, trade associations, organized labor, chambers of trade and industry, state-run schools, and youth and their parents in one comprehensive framework for preparing youth for high-skill, high-wage jobs.

6.3 Leveraged Costs

Although the issue of cost-effectiveness will be treated in a later section, partnerships with multiple public and private stakeholders can better support a project with financial and other resources than a single investor. For example, the case study of *Zamorano* provides a powerful example of how financial leverage can magnify limited resources. During its early years, *Zamorano* was funded and endowed by the United Fruit Company. Over the succeeding years this funding and endowment eroded, confronting administrators with the need to find new sources of financing. Today the school receives money from many different funders, including foundations, students, world donors, and NGOs. Foundation funding for a women's agricultural cooperative partially supports the work of one faculty member who supervises students in various modules. In one such module students learn by helping to train

the women in the cooperative on producing loofah sponges and then marketing them to various wholesalers. This training is so effective that the school has been offered funding by another foundation to duplicate the project in several other locations. This brings in yet more resources. As the women in the cooperative gain income, they are likely to be in a position to contract with the school for other services. By these and other means, *Zamorano* administrators believe they leverage each dollar they receive up to ten times.

6.4 Continued Innovation and Adaptation to Change

A system whose success depends on creating value for multiple stakeholders is much more likely to respond quickly to the introduction of new factors, such as the introduction of new work processes or technologies. Each of the 20 cases is a part of an extensive partnership between public and private sectors, with the exception of Senegal's *AGETIP* and Ghana's *EMPRETEC*, both of which are trying to create a private sector in their countries. Each of the 20 cases is, however, linked to multiple stakeholders. In many cases, these include world donors.

7. Sustainable Financing

The emphasis on sustainable financing (flexibility, leverage, multiple funders, and cost-effectiveness) is closely linked to the need for multiple stakeholders. Few if any workforce development programs can continue to innovate, change, expand, and accomplish the results they desire without a financing structure that is able to respond to different funding

circumstances. Financial sustainability is usually closely linked to flexibility—not being dependent on a particular form of revenue. Most of the cases included in this study use a combination of flexible financing methods, such as course fees, employer contributions, payroll taxes, loan repayments, fees for service, union dues, and public sector contributions, especially in paying for the costs associated with schooling.

7.1 Cases in More Developed Countries

Perhaps the biggest difference between cases in the developed or somewhat developed countries (Argentina, Australia, Brazil, Chile, Germany, Malaysia, Peru, Singapore, and the United States) and the others is the ability of the former to demonstrate their value to multiple investors over time. A key success factor is the presence of private sector employers and employer-related institutions that are willing to pay their way in the system. For example, in Peru employers insist on a payroll levy to maintain the *SENATI* system, as it provides them with a cost-effective source for entry-level skilled labor. In Germany, most employers believe that the dual system helps them compete internationally on the basis of high quality. In Singapore, employers invest in the *Skills Development Fund* because it is less expensive for them to train workers than to employ low-skilled labor.

7.2 Cases in Developing Countries

The financing of initiatives is more problematic in countries that only recently have begun the process of development or, in the case of the

Czech Republic, become a market economy. In most cases, donors make considerable investments, hoping that, over time, the program, project, or system will be able to demonstrate enough value that it can charge a fee for its services and sustain itself without further donor support. That is the situation with the Czech Republic's *National Training Fund*, Senegal's *AGETIP*, Ghana's *EMPRETEC*, the *RIBB* in Shanghai, *Zamorano* in Honduras, the *Building Trades Craft Union Training Consortium* in Poland, the IRTP in the Philippines, South Africa's *Workers College*, and the *Retraining of the Military* in the Ukraine. All these cases have to balance a difficult calculus: juggling the need to build a solid foundation against the pressure to show results and revenues.

7.3 Cost-Effectiveness

In many of the cases, data on cost-effectiveness are at best inconclusive. Moreover, it is often difficult to know how to determine cost-effectiveness, as to date there is no good way of measuring return on investment to human capital investments (OECD *Observer,* 1996). Furthermore, in this study no attempt has been made to determine cost-effectiveness across cases. Aside from the fact that the problem is like comparing grapes to grapefruit, one would have to develop a set of criteria against which the output of each program could be measured and compared. Since each program prepares people for different things, coming up with such criteria would be a formidable challenge, requiring the skills of experts drawn from a number of disciplines. However, various studies—for example, one by Finegold and Levine (USC,

1993)—have demonstrated that it is possible to evaluate training programs by broadly considering their benefits. The issue of determining cost-effectiveness is examined in greater detail in section V of this study, "benefits of investing in workforce development."

8. Replicability

8.1 Replication Within the Country

One way to identify a successful workforce development project might be asking to what degree it has been replicated. It can be argued that replication within the country may be a higher accolade than replication in another country, presumably because the domestic scrutiny is likely to be more intense. Of course, a country may skip the replication issue by developing a national system, as in the cases of Senegal, Chile, Germany, Australia, Singapore, and Shanghai. This appears to be easier when a shared understanding exists among all the stakeholders of what's at stake if the system is not developed. However, a replication of a project that is locally based is likely to depend on the following factors:

- recognized effectiveness of the project, including cost-effectiveness
- degree of available resources
- degree of social cohesion
- presence of stakeholders and their willingness to invest
- degree of commitment and leadership
- degree of infrastructure and communication technologies
- enabling policies

8.2 Replication Abroad

There are considerable pitfalls in attempting to transfer policy in training and education across boundaries. Research (Finegold, 1993) suggests that it is doubtful as to whether replication abroad is a key determinant of a successful program, because of so many variables that may be unique to the country. These include culture, degree of "vision" on the part of leaders within the "importing" country, and a well-proven track record, as well as all the factors listed in Section 8.1. Interestingly, however, 11 of the 20 cases have been replicated abroad. In many instances, this can be at least partly attributed to the participation of world donor organizations, who find opportunities to bring successful programs to different countries. This is the case with *Chile Joven*, *PROIMI*, *Penang Skills Development Centre*, the *Dual System*, *Miami-Dade Community College*, *AGETIP*, *EMPRETEC*, and the *Czech National Training Fund.* U.S. and other OECD policymakers have scrutinized the Australian system and borrowed some of its ideas, especially in the development of national skill standards.

9. Economic and Social Impact

Despite the lack of theories and models of good human capital accounting (OECD, 1996), a review of the case studies indicates that each of the 20 selected cases has significant economic and social impact. The cases differ, however, in the degree of impact and in the areas that are most affected. The following discussion summarizes key areas of impact.

9.1 Economic Impact

In each case, learners were enabled to participate more fully in productive work—either for themselves or for others. Review of the 20 cases provides abundant evidence of how workforce development cannot be separated from economic development and economic growth. In many instances, the programs helped to lift learners out of poverty income levels. In all instances, "graduates" had more choices—and a better future—available to them as a result of their increased skills and links to markets which value these skills. Individuals who participate in the programs featured in the 20 case studies are, for the most part, more productively employed, earning a higher premium for themselves, their families, communities, and society.

9.2 Democracy Building

Various theorists, from de Tocqueville to Robert Putnam (1994), assert that the strength of a democracy can be directly linked to civic participation. In his seminal work on civic institutions in Italy, *Making Democracy Work*, Putnam links participation in the civic institutions of a society to a strong democracy. In each of the 20 cases, individuals gained valuable skills that most likely allowed them to participate more fully in their society. Common sense suggests that an individual with improved math, reasoning, communication, or technical skills has a greater opportunity to interact with others and a better chance of thinking critically than someone with no skills. EDC's research examining the relationship between higher informal learning skills and civic

participation suggests the existence of a strong correlation between individual skills and participation in the community (Aring & Brand, 1996). Some cases, including those of *SEWA* and *Workers College*, place explicit value and emphasis on increasing trainees' ability to participate in civic matters and become leaders in a democracy.

9.3 Impact on Sound Environmental Practices

Several of the cases contribute to better environmental practices in their country or region; these include *PROIMI*, the *Dual System*, and *Zamorano*. Given the potential of developing technological "niches" in the global or regional economy through building capacity in environmental products and services, it is surprising to note how few cases paid significant attention to improving the environment. This oversight may be due to lack of policies and related incentives for developing people who are skilled in improved environmental practices or related products on the part of governments, as well as other policymakers, including private sector investors. As in the case of the former Rust Belt states of the Midwest in the United States, building skills and know-how in environmental fields is likely to be an important source of future work, and could be far more exploited by donors and others who invest in workforce development.

9.4 Impact on Population and Health and on Women and Girls

Several cases reach out to women who, as they develop more and better skills and find productive work, are likely to experience decreased fertility rates and practice better health measures. Although no formal

comparison studies have been conducted of these cases and their correlation to improved health practices, there is evidence to suggest that increased skills and income result in lower fertility rates. Cases indicating this impact include *SEWA* in India, *EMPRETEC*, in Ghana, *AGETIP* in Senegal, *Penang Skills Development Centre* in Malaysia, the *Integrated Recruitment and Training Program* in the Philippines, *Zamorano* in Honduras, and *Miami-Dade Community College* in the United States.

B. The Role of Government

In the literature and in the cases, the role of government was consistently important in successful workforce development investments. Some cases are directly sponsored by nation-states, including *SFD* (Egypt), *ANTA* (Australia), *Dual System* (Germany), *Chile Joven* (Chile), *SENATI* (Peru), and *NTF* (Czech Republic). In most nongovernmental initiatives, a supportive policy and regulatory environment was a critical factor, but some (*SEWA* and *Workers College*) have flourished despite government inaction or outright opposition. This section analyzes the role of government in supporting, encouraging, and initiating workforce development investment.

1. Conducting the "Political and Legislative Scan"

For investors such as governments, donors, or NGOs to understand how to successfully implement workforce development projects and

strategies, it is important to be familiar with the policy and regulatory environment. EDC workshop participants (Washington, D.C., 1995)[10] concluded that, in most cases, a hospitable and supportive policy and regulatory environment is essential for program success. Thus, a political and legislative scan is a crucial first step in any workforce development investment. When the desired intervention is national in scale, dependent on cooperative government policies for success, or to be administered by a governing body, it is important to understand the complexity of the interactions among economic, labor, trade, and social policies and how they may affect the project.

For example, in EDC's case study featuring the Ayala Foundation in the Philippines (*IRTP, Manila*), the foundation scanned the legal and regulatory environment in the Philippines. The information gained was used to formulate the project. This approach has enabled the foundation to stimulate the development of new legislation at the same time as it operates the project. For example, current government policy in the Philippines rewards employers for training during the first six months of employment (in the form of employers paying significantly lower wages). After the six months are up, employers must pay market wages and, as a result, they let youth go after just five months, adding them to the ranks of squatters that surround the Makati business district. In response, the foundation locates employers whose costs of labor turnover are unacceptably high and then asks them to train youth and subsequently keep them employed for a minimum of two years or repay the foundation a portion of its initial investment. The success of this

project comes in large part from the support of the employers with whom the foundation trains poor Filipino youth, and is leading policymakers and administrators to review the country's policies with regard to education and training.

As in the Philippines, policymakers in any other country or state need to consider whether appropriate laws and training policies are favorable to developing a skilled workforce. However, administrators will know how to analyze and respond to the implications of government policy and activities for a potential project only if they take an environmental scan. EDC's research and findings in best practice suggest that answering the following questions is a point of departure for investing in the development of a workforce. These questions will help to determine to what extent the environment can support the project and to what degree policy needs to be redesigned.

- Is there an official government employment or training policy? If so, what is it and how does it affect labor markets? What is the "unofficial" policy?
- What economic, social, or labor policies might constrict the potential project? What policies might help it? How can one mitigate the former and enhance the latter?
- What are the government's policy priorities? How does workforce development fit?
- What political, legal, and fiscal constraints does the government face?

- Within the administrative structure of the government, where might workforce development fit?
- What departments, ministries, and leaders are needed and how could they be enrolled to support workforce development initiatives?
- What is the best way to present workforce development to government officials? Who should be contacted to build the bridge?
- Who are the stakeholders that should be convened to develop an effective project, program, or system?
- What are the effects of different funding and accounting procedures on development initiatives?
- Should the program be developed outside the government?
- What other programs now exist that could be linked to each other and any new initiative to provide greater leverage of resources?

As stated above, it is not always essential to have a completely or even partly supportive environment. *SEWA* and *Workers College* are good examples of cases that have flourished without direct support.

2. Providing Opportunities for Greater Leverage of Funding

In the process of visiting many of the cases, EDC team members found that *donors often do not leverage their own or one another's investments*. For example, a multimillion-dollar, multidonor project on small-enterprise development that is not currently supported by USAID could be supported by missions by means of linking enterprise development to participant training programs that are supported by USAID. The United

States has some of the most highly recognized entrepreneurship programs, ranging from the Babson College Master's Degree in Entrepreneurship program (Wellesley, MA)[11] to many offerings at community colleges in each state. Not leveraging projects represents a lost opportunity to make existing projects far more effective. However, not leveraging projects represents an even larger loss to the people for whom the project is intended. Instead of maximizing resources by pooling investments, donors too often seem to "do their own thing," perhaps constrained by lack of information, considerations of politics, special agendas, turf, or lack of awareness of one another's work. Governments can play a critical convening and coordinating role, as is being done in Shanghai and Australia, to share best practice and coordinate funding resources.

3. Forming and Implementing Policies Conducive to Economic Growth and Workforce Preparation Projects

On a broader scale, many governments and donors have not yet realized the importance of a cohesive training policy that supports both firms and workers, including incentives to train and worker protection. Many more have not successfully balanced labor and employer interests, tilting too much toward one side or the other (this is often particularly true in agriculture, where producers are more likely to get supports other than labor). Still others have not successfully linked education systems and employers. Assisting governments in developing and enforcing good policy, and in coordinating varied efforts in training and workforce

investment, is a crucial part of improving the functioning of the labor market and the economic outcomes for workers and firms.

Many state interventions in economic and labor markets can negatively affect labor demand. The World Bank found that states failing to develop their economies fell into the traps of biasing investment against agriculture and toward industry, protecting domestic industries against international competition, dictating wage increases, and bloating the public sector through excessive expansion and job creation (World Bank, 1991).

How can donors, missions, NGOs, and other investors help governments avoid those traps and bring economic and wage growth? What types of workforce development policies should states develop? What is the proper role of states? The World Bank found that governments must pursue market-based paths that generate rapid growth in demand for labor, expand the workforce, increase productivity, and take advantage of new opportunities at the international level by opening up to trade and attracting capital (World Bank, 1995). In those countries struggling with the transition to a more market-based and internationally integrated economy, governments must move through the transition as quickly as possible without excessive or permanent costs for labor. In addition, governments must manage the inevitable dislocations by constructing a framework for labor policy that complements informal and rural labor markets, supports collective bargaining in the formal sector, provides safeguards for the vulnerable, and avoids biases favoring relatively well-

off workers (World Bank, 1995). Cases that have taken on this task include *SFD* (Egypt), *ANTA* (Australia), the *Singapore Skills Development Fund*, the *Dual System*, and the *National Training Fund* (Czech Republic).

4. Considering Ten Potential Roles for Donor Organizations, NGOs, Policymakers, Governments, and Missions

Building from the World Bank's list, EDC suggests 10 possible roles for governments that can be facilitated by outside organizations and donors:

1. supporting the development of occupational training standards and accreditation
2. building training markets by promoting consumer choice and competition among firms and diversifying supply
3. ensuring a financing mix for training among the state, private firms, and individuals
4. providing labor market and employment information
5. providing a strong system of primary through secondary education focused on skills acquisition and application
6. opening up trade and attracting capital, often by linking small enterprises to medium-size and large companies
7. constructing a labor policy that provides a safety net for both rural and informal workers, supports collective bargaining, and is open to everyone
8. protecting the vulnerable

9. ensuring decent working conditions
10. encouraging donors, NGOs, and governments to link together—both within a country and with similar projects in other countries—different investments that are currently isolated.

Connecting existing programs that enter into workforce development in a given region or country at points that promise highest leverage is an excellent way to begin to build pathways for a system to develop. The power of interventions is magnified when they are linked. For example, it would seem that the Peruvian *SENATI* system that prepares youth with basic manufacturing skills could be linked to the National Demonstration Centers for Excellence in Advanced Manufacturing in the United States; this could be achieved with relatively little cost, as both elements of the system are already in place, although in different countries within the Americas.

Likewise, a successful inventor and producer of computer accessories that compensate for power outages common in developing countries could be a valuable partner for U.S. computer firms looking to establish a foothold in the developing world. EDC found that while USAID and other donors fund the program in which the inventor gets trained, no one seems to link the inventor with appropriate contacts, even though increasing export opportunities for United States businesses is one of the stated goals of US foreign assistance.

The role of donor organizations, such as USAID missions and other intermediary organizations, is clear: facilitate stakeholder learning and the flow of information among all investors. This could be achieved by providing resources for items such as: technical assistance in design and the improvement of education, economic, labor, and trade policy; building information networks and bridges across and within countries; linking one another's investments to gain highest leverage; offering best practice consulting; furnishing technical assistance in program design; and learning from the people who are developing and managing successful projects, programs, and systems. These and many other potential avenues of assistance are ways for missions to help governments devise and implement policies and programs that support, encourage, and nurture workforce development.

V. Benefits from Investing in Workforce Development

In policy analyses of economic or social interventions, most experts ask the bottom-line question, Is it worth the opportunity cost of doing something else with the resources? The answer usually has to quantify the benefits of the investment and compare them with the costs of the project. Quantifying the effects of a project in a consistent, scientific, and accurate way is the most complicated and difficult task facing evaluators, analysts, and policymakers. The difficulty in answering this question has two roots.

First, the effects of a project are often difficult to separate out from the influences of other factors, the classical "confounding factors" statistical problem. We may be able to measure that incomes in a given region have increased, but to what factors and in what proportion should we attribute that increase? How much is due to our project to educate entrepreneurs about better cost accounting and how much is due to the presence of two new multinationals for which the entrepreneurs are now suppliers? The difficulty in extricating a single factor in an interdependent system makes cost-benefit analysis more complicated to execute.

Second, the effects of a project are often difficult to quantify in easily measurable units that accurately reflect project goals. Perhaps a project teaches basketweaving to women in India. How can we measure its success? What yardstick do we use to test increased basketweaving

skills? How do we describe and quantify women's increased competence and self-esteem, as basketweaving is a traditionally male occupation in India? Do we consider only one basketweaving business surviving when eight others fail to be an indicator of failure or success in an environment where women's economic activity is seriously devalued and actively impeded? How can we quantify what benefits can be attributed to the success of one such business to the surrounding economy, and over what time period? In essence, our models of analysis are often unable to define, measure, capture, or quantify what "success" means in a consistent way and whether or not it has been achieved.

The OECD's General Secretary, Jean-Claude Paye, sums up this problem as follows:

> Human Capital...developments in the knowledge-based economy are difficult to assess by traditional economic statistics. The OECD is therefore devoting considerable effort to developing better indicators for knowledge inputs such as R&D and training expenditures, skills, and competencies, flows of knowledge in the form of exchanges of ideas and diffusion of technology and, most of all, returns to knowledge investments. New conceptual tools will help firms and governments to maximize the quality and productivity of knowledge in both human capital and technology. (OECD, 1996)

Because the question of returns on investment (ROI) in knowledge and skills is so critical for shaping employer behavior, donor investments, and policy, EDC is pursuing state-of-the art research into developing an ROI model that links informal learning (learning that does not occur in a classroom, and that focuses on employability skills and leadership traits) to various indicators of a firm's performance. Research into how people learn suggests that more than half of what people learn is acquired in informal ways. Pilot research at three Motorola plants, where approximately half the entry level workforce could be considered special populations, indicates an ROI of 300 to 500 percent in just on area of informal learning—teaming. Moreover, the pilot research also indicates that of the eight most intensive informal learning situations found at Motorola's workplaces, only one is experienced in the public education system (Aring & Brand, 1996).

How to embed learning of employability and technical skills more directly in work processes is not only an issue for the highly developed nations. It is important also to developing a workforce in the less developed countries that—in the case of microentrepreneurs—might best learn in informal settings and that—in the formal sector—need to improve their skills to obtain a job. With support from the German Marshall Fund of the United States, and in partnership with Germany's Federal Institute for Research and Development in Education and Training (BiBB), EDC is convening a forum of experts to meet over a three-year period in Europe and the United States in order to compare findings in informal learning practices. These data should have useful

implications for various workforce development initiatives around the world.

VI. Summary

This Study represents one-third of the *Compass to Workforce Toolkit* that includes a Video and a Guidebook containing 20 best-practice case studies. The purpose of the *Toolkit* is to help world donors, policymakers, NGOs, governments, private sector investors, and USAID missions to develop effective, market-oriented workforce development initiatives around the world. The Study provides the theoretical and conceptual grounding for workforce development—from definition through external challenges, from analysis of best practice to suggested roles for investors. The criteria for what constitutes best practice were developed by means of a workshop, held in November 1995, and facilitated by EDC, that included representatives from world donor organizations, government officials, multinationals, and educators. This study does not represent a formal evaluation of the 20 selected cases; neither does it provide a formal policy analysis in which costs are compared to benefits. This study does, however, draw extensively from the literature and the 20 cases to provide rich examples of how developing a workforce can link and leverage the results of two very different types of investments that are usually considered separately: investment in human capacity (i.e., basic through postsecondary education) and investment in economic development (job creation, economic growth, and training.)

Why is workforce development so important? Despite unprecedented flows of private money into poorer countries from U.S. and other

sources, recent World Bank and UNDP publications warn that unless we reverse the widening gap between rich and poor nations now, the results for future generations will be disastrous. In many developing countries, the bulk of the population is under 25. In many such countries, youth and their parents face a bleak future, as there are virtually no jobs or opportunities for productive livelihood by means of self-employment. While this study will hopefully contribute to knowledge about how the development of a workforce can directly contribute to economic growth, health, population control, democracy, and the environment, we suggest it might also be used even more powerfully: to examine workforce development across programs, across agencies, across funders, across partners, and across the education and training spectrum.

The failures of investments in traditional manpower studies and vocational-technical training in the 1980s have been well documented. Now is the time for a new paradigm—a new context—that links the development of human capacity to a region's economy and the global market. Shifts in perspectives often reveal startling new vistas. By shifting to a different context, this study proposes a new definition of workforce development as "*enabling all people to have access to opportunities that enhance the development of their skills, knowledge, and aptitudes such that they are able to participate in productive work, either by means of self-employment or by working for someone else.*"

The global economy provides exciting new opportunities in the form of decreased costs for technology, lowered barriers to entry into the

knowledge-based economy, and an abundant base of human labor who are potential consumers. These opportunities are balanced by daunting challenges such as decreased employment as productivity increases, together with accelerating rates of technological innovation that make it harder for developing nations to catch up as skills and tools more quickly become obsolete. The global economy also affects the role of the nation-state as economic actors collaborate and compete across traditional economic boundaries.

In analyzing eight important trends in workforce development, this study finds that skill requirements for formal sector employment in the year 2020 and beyond will be quite different from those in the past, as the nature of work is changing with the introduction of newer, more sophisticated technologies. As workers no longer have jobs for life, they must acquire core skills—as well as superior technical skills—that allow them to adapt quickly to different settings. These changes put enormous pressures on improving basic education systems throughout the world, while at the same time linking these systems more powerfully to employers and the global market. While workers in the informal sector often possess the core skills and flexibility to adapt quickly, investments in these individuals require different approaches that integrate support across what are often separate agencies.

As the more developed countries seek to find their economy's competitive advantage, some have created highly successful national training systems. Still other countries have devised or are developing

national industrywide skill standards as they seek to improve the efficiency of their education and training systems. And while, traditionally, education and training have been the province of the young, the need for lifelong learning puts further pressures on less than flexible public sector institutions, that, like elephants, must "learn to dance."

The remaining sections of this study (sections IV and V) focus on findings that come from examining the 20 best-practice cases drawn from around the world along nine key dimensions: 1) leadership and accountability, including values, principles, and procedures; 2) demand-driven design, focusing on the degree to which information flows among the social partners or stakeholders in the system; 3) open access, which looks for a balance between high stakes to improve motivation and lower barriers to entry and exit so that the greatest number of people can participate; 4) portable skills, which can cross geographic as well as job-specific boundaries; 5) continuous improvement, which compares the use of internal assessments, external evaluations, and continuous improvement practices associated with Total Quality Management practices 6) public-private partnerships, which bring private and public sector stakeholders together as social and financial partners; 7) sustainable financing, which links multiple, flexible financing to sustainability over time; 8) replicability, which examines what factors influence replication; and 9) the economic and social impact of the project, program or system, which examines the degree to which the program contributes to economic growth, helps build democratic process, and contributes to the environment. In the final part of this study, we

also examine the potential roles of governments, donors, policymakers, and other investors. We suggest ways in which current investments in workforce development programs could become even more powerful by leveraging the investments of different investors to magnify the effect. The Study makes suggestions for forming and implementing policies that are conducive to economic growth and workforce development, and it recommends 10 potential roles for government, policymakers, NGOs, and other investors as they consider the benefits of investing in workforce development in their countries. We conclude by suggesting that the 20 cases in the Guidebook provide abundant evidence that workforce development can work for virtually everyone in the city, region, or country. This point is especially important to consider, as policy makers and investors cannot reach for traditional economic cost-benefit analysis to quantify the returns on investment to developing a given workforce. As we await the development of new economic models capable of analyzing complex systems, we suggest that the 20 cases and many others around the world point the way to a future where all people have *"access to opportunities that enhance the development of their skills, knowledge, and aptitudes such that they are able to participate in productive work, either by means of self-employment or by working for someone else."*

ENDNOTES

[1] Outside Expert Consultants included Gregory Wurzburg of the OECD, David Finegold from the RAND Corporation, and John Wirt, then at the U.S. Government Accounting Office (GAO)

[2] Labor Markets and Social Policy in Central and Eastern Europe. The Transition and Beyond. Edited by Nicholas Barr. Published in association with the London School of Economics and Political Science and the World Bank. Oxford Univ. Press 1994.

[3] Don Smith, Ph.D. Address given at Great Lakes Governors' Association meeting in Johnstown, PA. Oct. 1996. The Center for Economic Development, Carnegie Mellon University.

[4] Operation Breakthrough! A project developed by EDC Inc. In partnership with Mobil Corporation to enable high school youth to improve their math skills so they could pursue post-secondary education in order to be employable in technical occupations, such as in Mobil's largest U.S. refinery in Beaumont, Texas.

[5] The idea that a worker can inhabit a different economy than the one in which s/he lives was first publicized by U.S. Secretary of Labor Robert Reich.

[6] SCANS (Secretaries Commission on Achieving the Necessary Skills.) U.S. Commission which identified what skills employers needed in workers. 1993.

[7] Paper delivered to Ministers of NIS Countries near Washington DC in April 1995.

[8] ISO 9000 is an international standards organization headquartered in Geneva which coordinates the development of common standards among some 100 countries. The term 9000 refers to the number of standards which have been developed. At this time, some 14000 common standards have been developed for products and processes, including training.

[9] The city-state of Hamburg has the best developed program for disadvantaged students in the Dual System.

[10] A workshop convened by EDC in which 14 experts participated (see section on Methodology).

[11] Babson College in Wellesley, MA is widely recognized the one of the top business schools for would-be entrepreneurs.

REFERENCES

Agency for International Development Congressional Presentation Fiscal Year 1996. United States Agency for International Development, 1995.

Aring, M. K., & Brand, B. (1996). *The teaching firm: a report on informal learning at motorola.* Newton, MA: Education Development Center, Inc.

Aring, M. K. (1995, April). *Cross-border issues regarding the development of skill standards.* Paper presented at meeting of Ministers of NIS Countries near Washington D.C.

Aring, M. K. (1994). *Case study of Motorola.* Newton, MA.: Education Development Center, Inc.

Aring, M. K. (1993, January). What the v word is costing America's economy. *Phi Delta Kappan.*

Aring, M., Leff, J., & Malyn-Smith, J. (1995) *Gateway to the future: Skill standards for the bioscience industry.* Newton, MA: Education Development Center, Inc.

Barr, N. (Ed.). (1994). *Labor markets and social policy in Central and Eastern Europe: the transition and beyond.* New York: Oxford University Press.

Berryman, S., & Bailey, T. (1995). *The double helix of education.* New York: Columbia University Institute for Education and the Economy.

DeMott, J.S. (1996). Came the whirlwind. *World Business*, vol. II. no. IV, July-August.

Eagleburger, L. S., & Barry, R. L. (1996, July/August). Dollars and sense diplomacy *Foreign Affairs*, 75 (4).

Finegold, D. et al. (1995, April). *International models of management development. Enterprising Nation, Report of the Industry Task Force on Leadership and Management Skills.* Australia: Australian Government Publishing Services.

Finegold, D. et al. (1993). *Something borrowed, something learned?* Washington, D.C.: The Brookings Institution.

Fluitman, F. (Ed.) (1989) *Training for work in the informal sector*. International Labour Organisation (Geneva) in collaboration with the International Centre for Advanced Technical and Vocational Training (Turin, Italy).

Francis, D.R. (1996) Private money floods into poorer countries. *Christian Science Monitor*. September 20, 1996.

Griffin, S. (1996, July/August). Can imagination save us? Thinking about the future with a beginner's mind *Utne Reader*.

Handy, C. (1994). The Age of Paradox. Boston: Harvard Business School Press.

Herschbach, D. R., et. al. (1992). *Vocational education and training: Review of experience*. Latin America and Caribbean Education and Human Resources Technical Services Project, United States Agency for International Development.

The International Bank for Reconstruction and Development, World Bank. (1995). *Workers in an integrating world: World development report*. New York: Oxford University Press.

International Bank for Reconstruction and Development, The World Bank (1991). *Vocational and technical education and training: a World Bank policy paper*. Washington D.C.

Leach, F. (Ed.) (1995). *Education and Training for the Informal Sector*. Volume 2, Serial 11. Overseas Development Administration, March.

Levinger, B. (1996). *Critical transitions: Human capacity development across the lifespan*. Newton, Massachusetts: Education Development Center, Inc.

Middleton, J. & Demsky, T. (1989). *Vocational education and training: A review of world bank investment*. World Bank Discussion Paper #51. Washington DC: The World Bank.

National Center on Education and the Economy. (1990). *America's choice: high skills or low wages?* Washington, D.C.

Paye, J.C. (1996, June/July). Policies for a knowledge-based economy. Organization for Economic Cooperation and Development. *OECD Observer*, 20.

Putnam, R. (1993). *Making democracy work*. Princeton, N.J.: Princeton University Press.

Practical Applications: Vocational Education and Training. Latin America and Caribbean Education and Human Resources Technical Services Project, United States Agency for International Development, 1993.

Rifkin, J. (1995). *The end of work*. New York: G.P. Putnam.

Russell, G. (1993). *Creating a high-quality work force*. Latin America and Caribbean Education and Human Resources Technical Services Project, United States Agency for International Development.

Schwartz, P. (1991). *The art of the long view*. New York: Doubleday.

Smith, D., (1996, October). Advancing North America's high performance heartland: linking people, the economy and the environment. (Address given at Great Lakes Governors' Association meeting in Johnstown, PA.) Pittsburgh, P.A.: The Center for Economic Development, Carnegie Mellon University.

Stevens, C. (1996, June/July). The knowledge-driven economy. *OECD Observer*, 20.

Tan, H. W., & Batra, G. (1995). *Enterprise training in developing countries: incidence, productivity effect, and policy implications*. Washington, D.C.: The World Bank.

Ulrich and Greenfield. (1995). The transformation of training and development to development and learning. *American Journal of Management Development*. 1, 2.

United Nations Development Program. (1996). *Human development report*. New York: Oxford University Press.

United States Department of Labor. (1993). *SCANS* (Report of the secretary's commission on achieving the necessary skills). Washington, D.C.

World Bank. (1993). *World development report: Investing in health*. New York: Oxford University Press.

APPENDIX

Case by Case Comparison of Pressures and Trends Affecting Workforce Development

Workforce Development Workshop

Summary of EDC Workforce Development Workshop

Identifying Critical Elements of a Successful Workforce Development System

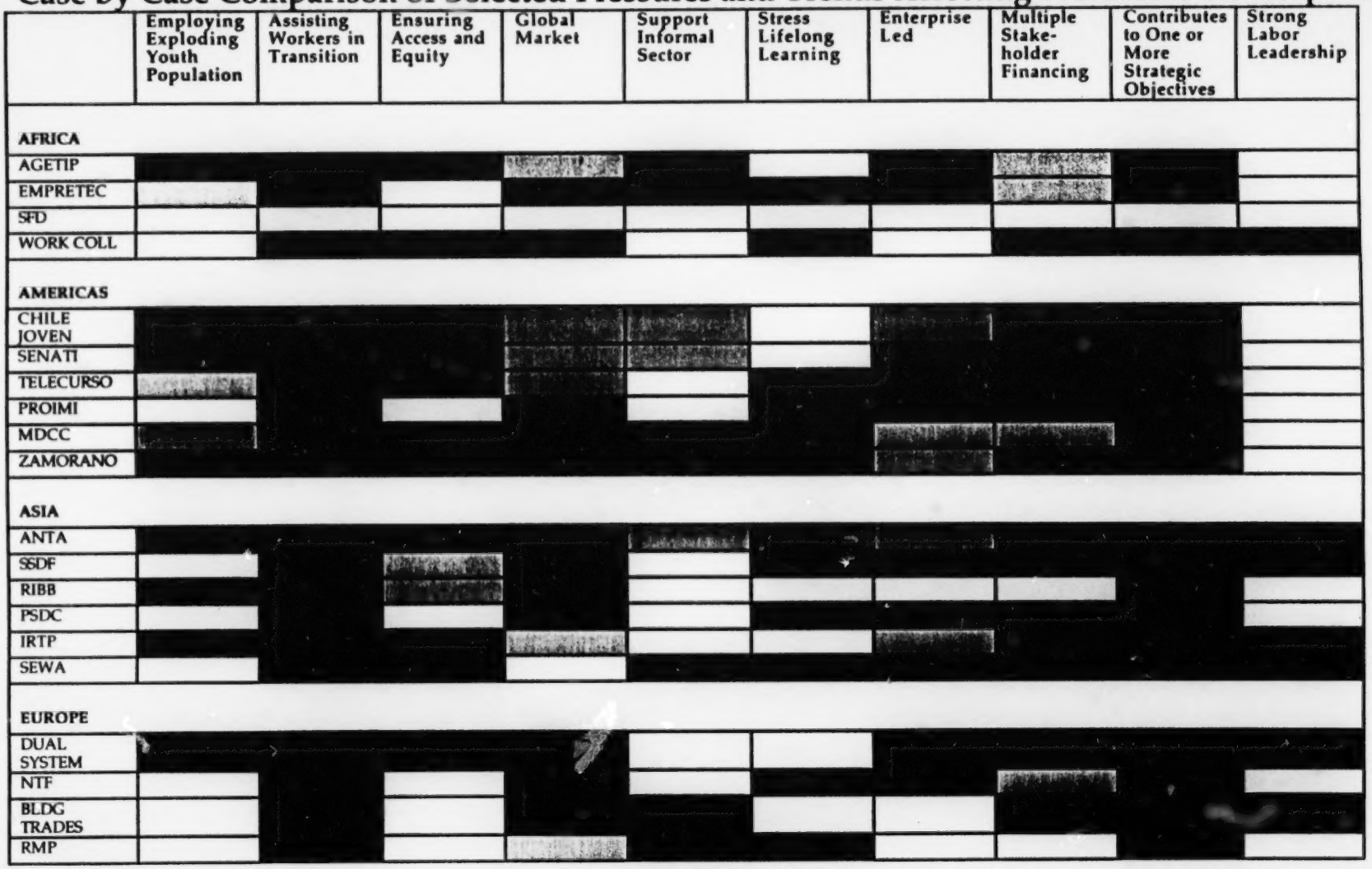
Meta Contextual and Guiding Principles

Questionnaire

Case Criteria Sheet for Nominees

Nominations of Possible Workforce Development Case Studies

Case by Case Comparison of Selected Pressures and Trends Affecting Workforce Development



Workforce Development Workshop
November 16-17, 1995

Workforce Development Experts:

Betsy Brand
President
Workforce Futures

Brian Dabson
President
Corporation for Enterprise Development

Ken Edwards
Director, Technical Services Dept.
IBEW

Jim Frasier
Mgr. Learning Research
Motorola

Gary Garman
Mgr. Training & Professional Development
Siemens Stromberg-Carlson

Jeff King
Program Officer
German Marshall Fund

John Middleton
Chief, New Products Division
World Bank

Claudio de Moura Castro
Chief, Social Programs Division
Inter-American Development Bank

Dr. H. Jeffrey Rafn
Commissioner
Dept. of Postsecondary Technical Education
New Hampshire

Andrew Samet
Associate Deputy Undersecretary
International Labor Affairs Bureau
Dept. of Labor

Hong Tan
Senior Economist
World Bank

David Waugh
Deputy Director
International Labor Office
Washington Branch

John Wirt
Director
JW Associates

USAID:

John L. Anderson
Democracy/Education Advisor
Strategic Planning Division
Bureau for Asia and Near East

Gary Bittner
Higher Education Analyst
Office of Policy & Programs
Center for Human Capacity Development

Ethel Brooks
Field Training Specialist/RSSA
Office of Field Support and Technical Assistance
Center for Human Capacity Development
Global Bureau

Mike Cacich
Research Analyst
Center for Development
Information and Evaluation Bureau
for Policy and Program
Coordination

Joyce Kaiser, Consultant
Training and Exchange Staff
Office of Human Resources
Bureau for Europe and the New
Independent States

Hiram Larew
Policy Analyst
Bureau for Policy and Program
Coordination

Robert McClusky
Education Development Specialist
Office of Policy and Programs
Center for Human Capacity
Development
Global Bureau

Ron Raphael
Field Training Specialist/RSSA
Office of Field Support and
Technical Assistance
Center for Human Capacity
Development
Global Bureau

Luis Salicrup
AAAS Fellow
Office of Policy and Programs
Center for Human Capacity
Development
Global Bureau

Emily Vargas-Baron
Deputy Assistant Administrator
Director
Center for Human Capacity
Development
Global Bureau

Joy Wolf
Educational Research Analyst
Institution for International
Research

Robert Wrin
Associate Assistant Administrator
Center for Human Capacity
Development
Global Bureau

EDC:

Monika Aring
Director
Center for Workforce Development

Cathleen Corbitt
Research Assistant

Laura Coughlin
Research Assistant

Mike Laflin
Director, Washington Campus

Gail Greenblatt Saporito
Project Coordinator

Summary of EDC Workforce Development Workshop
November 16-17, 1995

Purpose:

Monika Aring (Director of EDC's Center for Workforce Development and Sr. Project Director) and Brian Dabson (Workshop Facilitator and President of the Corporation for Enterprise Development) explained the purpose of the workshop and its relationship to the study EDC has undertaken for the United States Agency for International Development (USAID). The purpose of the workshop was to bring leading experts in the field of international workforce development together to:

- frame the issue of workforce development internationally
- determine the parameters of the study
- suggest model workforce development programs for inclusion in the study
- outline the Mission Guidebook on improving the skills of the workforce

Workforce Development Scenarios

John Middleton, Chief of the New Products Division at the World Bank, presented his sketch of workforce development. Workforce development was a "hot" area of investment from the 1950's and 1970's, and began to falter in the 1980's. The World Bank and other agencies supported training schools based on the projection of growth for various sectors, determining what would be needed down the road and preparing for it. The training schools were 2 to 6 times more expensive to run than regular schools, and proved to be largely ineffective for several reasons:

- the workforce didn't grow in the way forecasted
- some fundamental assumptions were wrong, for example, employers didn't employ in strict categories, they made different choices, including training people themselves
- restructuring of occupations
- training school graduates demanded higher wages, and employers decided to pay half the wages for a non-graduate instead and train the person themselves
- vocational schools were used to divert young people from university

Contrary to the widespread failure of the vocational training school, some public training systems have worked very well (SENA, SENAI), principally in Latin America. These examples were successful because they did not depend exclusively on the government. They were flexible, and redirected to where employment was growing.

There is evidence to indicate that government policies to encourage more training can work, such as in Hong Kong. However, policy can also go too far and subsidize activities that would have taken place anyway. Economic policy matters a lot in whether training will be successful, and if effort is put into encouraging and supporting markets to function well, many training activities will often

happen. The study should endeavor to find models of macro-level policy development successes (and failures).

The informal sector deserves special attention. In many countries, large percentages of the workforce are employed in the informal sector. In this sector, general education is often the best predictor of success.
It seems that the traditional apprenticeship model is very adaptable here, but cases are needed to document training in this sector.

Hong Tan, Senior Economist at the World Bank added a number of points to this presentation:

- Countries must adapt to economic context, even successful programs (SENA) must change as the situation changes.
- The same program in nearly the same circumstances may still not work (i.e., when Malaysia tried to replicate the skill center that Motorola had developed, in this case the difference was that the genesis did not come from employers in the replicated centers).
- Firms don't train because they don't need it because technology is standardized
- some don't know how to do it
- and some are afraid to train because someone else will steal that employee
- Many SMEs are really quite homogenous, very efficient, many R&D intensive.
- Many firms don't know government incentives are available.
- Public training institutions play a small role in post-school training.

Region Summaries

A representative from each region was asked to summarize workforce development.

Latin America
Trends in training are:

- directed to jobs, not general
- focused on job performance
- directed toward strategic objectives
- applying best practices
- training pacts between trainee and employer
- focused on skill gaps
- train a critical mass of people for support
- follow-up mechanisms, reinforcement

Africa
Most missions in Africa are really learning about workforce development. Their strategic objectives are focused on other things: health, population, and basic education. The training that is done is under the rubric of HRDA and targeted "critical mass" skills and focused on key institutions.

Asia
Asia is a very disparate region. The focus in Asia is often on women and girls, especially urban vs. rural. Cambodia and Nepal are concentrating on the adult literacy component of workforce development. Some missions are doing other workforce development, such as in the Mindanao region of the Phiiippines providing business skills training for rural entrepreneurs or Bangladesh's business advisory service centers. Some training is more sectorally-focused, such as Egypt's energy management manpower development industry-based environmental training exchanges.

Europe and the Newly Independent States
Training here is short-term, done in groups, and focuses on training a small cadre who will take skills back and share. In 2 years, 6600 people have been trained in and out of country.

There are no education programs at all in the NIS. Often, missions respond to government inquiries. One example of a specific project is the Partnership Project, which pairs US institutions with in-country organizations, setting up training-related activities and products.

Identifying Critical Elements of a Successful Workforce Development System

Four breakout groups identified critical elements of a successful workforce development system. The work of the small groups is presented in an accompanying document.

The large group then created a three-level framework for analyzing best practice cases: 1) meta-contextual factors, 2) guiding principles, and 3) operational/programmatic features. This framework is included in this packet.

Current USAID Workforce Development Investment

Cathy Corbitt, EDC project research assistant, presented the preliminary findings of her research. Workforce development was rarely at the fore in the AID documentsavailable for review, and many times it was called something else. However, there were consistant threads of workforce development in many mission objectives:

- formal USAID projects such as the Participant Training Program and the Human Resources Development Assistance project (HRDA)
- as part of another, seemingly unrelated, strategic objective such as "improving maternal and child health," which includes the training of health care workers. Teacher training and environmental management are also common places to find workforce development.
- as part of microenterprise and small business development initiatives
- as part of an objective to increase agricultural productivity or technical capacity
- in improving women's lives through increasing skills and economic participation
- in a "special circumstance," such as NAFTA in Mexico or reintegration of ex-combatants in Mozambique, where vocational training is part of an overall strategy to address change
- as part of assistance from PVOs, such as the International Executive Service Corps

Ms. Corbitt indicated that EDC's final report would also list the "top tier" USAID missions doing workforce development as defined by specific criteria.

Discussion and Amendment to Day One Work

To begin the second day, the floor was opened for discussion and amendment to the previous day's results. Topics included discussion of:

- when "customer-driven" becomes problematic, specifically when interest groups push for programs that do not match labor market needs or employer requirements
- the importance of macro and micro economics, contextual factors, and history
- the criteria for cost-effectiveness
- the role of luck, good and bad, in success and failure of programs
- the problem of consumer myopia and short-sightedness
- balance between planning and flexibility
- need for training that provides for life-long learning, transferable skills, and choices
- the key factor of the degree of labor market uncertainty

Nomination of Possible Case Studies

After slight amendment to the meta-contextuals and guiding principles, the group split into two and nominated case studies. The results of each group were recorded and will be investigated for the EDC report.

Suggestions for the Study

The group suggested how to frame and present the study. Initially, a concern was raised about the ability to do the study "right" (visit a lot of sites first hand and record data) because of the funding level. Many programs are simply not well documented. It was felt that this was a great opportunity to update the World Bank's work of four years ago, but that relying on secondary studies would add only so much to the existing body of knowledge in the field. The ILO and the World Bank are currently undertaking similar studies.

It was suggested that EDC begin with the principles: how they were picked, why they are "quality indicators," and why these are valid principles to stand on. Then, the models should be selected to put these principles into practice (not necessarily all at the same time, but at least one and do it well).

- More detailed case studies should show how the models put the principles into play.
- It was suggested that 2/3 of the models should be from developing countries.
- Models must span the depth and breadth of the situations and contexts in which missions find themselves.

Suggestions for Guidebook

Several points about the guidebook were made. The guidebook should:

- be the road map of the process of creating workforce development programs or systems.
- set a vision for what successful workforce development looks like and how to get there
- have a keywords index because there must be multiple ways to get to the programs that will work for you (hypertext linking, search, cross-reference, etc.)
- This included a discussion of how to best present the guidebook: a hypertext linking or CD-ROM was preferred, but likely unfeasible given the funding level. A binder was the next best option.
- give missions models to use and show them how and under what conditions (constraints, environments, etc.) they worked and what they addressed
- discuss what has not worked
- explain the replication process and what to do with the models
- include a strong section on how to set up an information gathering and monitoring system
- related to the four overall USAID objectives and current activities
- include two paragraphs on each model
- contain a matrix that looks like:

Guiding Principles---> Contextual Factors--->Projects--->Oper./Programmatic Principles

Identifying Critical Elements of a Successful Workforce Development System
Workforce Development Workshop

Group #1

Physical infrastructure (technology)
Political economy/governance (if don't understand this, it can't work)
Legal
Information knowledge system
Education
Quality
Money

Group #2

CAPACITY
Program development processes are complete, replicable, and culturally appropriate
Integrate all levels of enterprise development
System able to renew and regenerate itself
Must exist in larger context--lifelong learning
Integrated in context of lifelong learning, learning communities, and systems
Hard and soft skills--will do and can do--soft skills must consider cultural context
(multinational programs in various sectors)
Must train trainers
Participatory and flexible
System: recognizable principles and procedures
Creativity linked with all global delivery services

SYSTEMS DESIGN
Access
Equitable
Open access includes continual national assessment of income distribution (full participation of low income, female, rural, and minority groups)
Accessible and successful (ensures inclusion for all people, including disenfranchised)
Must include worker training and retraining

CURRICULUM
Education and work are linked
Integrated at all levels
Effective utilization of learning and performance technologies

Group #2 (continued)
Multiple avenues and flexible exit points--open entry, open exit
Outcome
Portable skills: firm to firm, region to region
Focus on deliverables
Must establish standards and certification levels
Flexibility and transferability of skills

OUTCOMES
Market driven/customer driven
Way of anticipating trends
External assessment and evaluation system
Each factor contributes to market development
Competency is not time-based

INFORMATION
Comprehensive labor market info. system
Labor market info. must be available to everyone (1 stop BIZ centers)
Consumer report on training providers

FINANCING
Multiple sources of financing
Cost effective
Flexible financing system

GOVERNANCE
Good partnership with government, industry, and education
Mutual investment by partners (including customer): all put something in the pot and the outcome matters
Mutual policy making authority

Group #3

Must know where the people are and where they want to be, so must do a needs assessment first to figure out the "skills gap" to guide investment; ongoing assessment.
Employer self-interest drives investment in training
Clarify role of public sector in training
Appropriate role for govt.: provide information about workforce opportunities for all parties

Group #3 (continued)
System should be self-sustaining for the long term; have measurable outcomes; demonstrate effectiveness:
- social impact
- cost benefit
- environment

Flexibility; responsive to changing economy, technology, social needs; capable of evolving; support adjustment
Recognize that all the parties have different objectives, motives, and interests
Recognize training systems as support for economic development rather than the end in itself
Diversity is essential; multiple strategies for multiple sectors
Training policy could be multi-level: national/regional/local
Workforce development builds on basic education:
- the level of education that people bring to the labor market determines the workforce development strategy

Workforce training depends on investment in basic education
- basic education is a platform for training development

Workforce training is not a substitute for basic education:
- there's tension over calling it education or training. If it's education, then government owns it; if it's training, then the private sector owns it

Incentives to stimulate employer investment (get employers to see the light); employers should have a vital role in designing it
System needs to serve different populations in society:
- preparing for employment
- working people
- unemployed

Group #4

Essential Components of Effective Workforce Development Systems
Characteristics and Features

Run by employers (or someone who loses if it doesn't please employer) with a goal
Part of entire company system
Worker pays for part, employer pays for part
Workforce development goes on all the time, continuous upgrading throughout the life cycle
Supply-demand management: flexibility of management to respond to market opportunities
Delivery can be by a variety of modes: firms; community colleges

Group #4 (continued)

Objectives, goals, what is it going to do--paying attention to target populations and participants (rural, women, etc.)

Provide information to students, parents, and employers about what's going on and how to take advantage of it (marketing)

Create indicators (evaluate based on indicators), set participation targets (income over time, employment picture)

Increase competitiveness

Grow new business and industry

Must be training "plus" (capitals, materials) some way to implement/make use of what you've learned

Long-term extensive blue collar training paid for and done by public source. Short-term, targeted, white collar paid for, done by private source

Quality--who is willing to pay for it?

Assumption: massive investment in basic education and initial training

Affect change by spreading training; the trained individual as a change agent who will teach others

Where should training take place? Want to create maximum access for training.

Accountability (respond to market, business)

Provide access to better wages and employment, not to training

Training that is a little bit ahead of the market

Costs and benefits must be aligned

Transfer of technology

Meta Contextual and Guiding Principles

Meta/Contextual (environmental scan to determine nature of intervention)
maturity of policy/governance system
social capital/cohesiveness
legal system
knowledge infrastructure
education system
culture/culturally appropriate

Guiding Principles
promotes all levels of economic development
built on or providing basic education skills
employer-led (public-private partnership)
multiple-funders, leverage funding
performance-based (what you actually know and can do....) (quality)
market driven (customer driven)
open to and equitability for all populations
promotes entrepreneurship
individual invests in own skill development
builds in lifelong learning
flexibility
can perpetuate itself (regenerates/is renewable)
recognizes different interests/players
recognizes impact of individual as change agent
workforce development linked to multiple systems (education, economic development, social supports)
information on labor market is available
anticipates market opportunities
govt. and other parties play appropriate roles
builds on basic education, not a substitute for basic education

Operational and Programmatic Principles
competency-based, not time-based
open entry, open exit
clear goals
knows target population (based on needs assessment)
based on labor market information
links education and work
utilizes various learning technologies, including distance learning
provides portable skills
focus on deliverables
establishes standards and certification

Operational and Programmatic Principles (continued)
uses external assessment
cost-effective
provides training
accountability is built-in
access to better wages and employment
trains trainers

QUESTIONNAIRE
FOR WORKFORCE DEVELOPMENT PROGRAMS

Case Overview
Contact Info:
How was the program started?
Who/what group started it?
When and where?
Primary objectives:
Geographic and participant coverage of program ? (matrix)
Describe participants in terms of: Gender? Age range? Ethnicity? Income level(s)?
What is unique about your program?
What results have you seen? (over what period of time?)

Country Background Info. (ed. attainment, some socioeconomic info. will be woven into the cases.)

Details of each of the Key Success Factors:

Leadership, Accountability
Primary strategies?
Philosophy/conceptual framework underlying program?
What are the recognizable values, principles and procedures which govern the project/program/system?
Why are they set up this way?
What standards exist to uphold these principles?
If so, who or what organizations defines what skills are deemed necessary to learn?

Demand-Driven Design
How is this project or program or system tied to the market?
Is this project/program/system tied into the international market in any way? (For instance, do the skills/products the individuals develop compete on the international market?)
What information do participants and program designers/ policymakers have about labor market needs in their region/country?
Does this project attempt to anticipate trends in skills demand or workforce development gaps?
If so, how does it do this?
How are the trainers in this program trained?
Where are the trainers trained?
To what extent is the program competency based as opposed to time based?
Is there a clear focus on deliverables? If so, in what way?

Open Access
What populations is this project geared toward: Urban? Rural? Men? Women? Youth? Elderly? Unemployed? Laid off?
What segments of the labor force are being trained and why?
How accessible is the project/system/program to women and girls?
How accessible is the project/system/program to other populations (specify populations)?
Can you give examples?

Portability of Skills
Does this project/program teach or help people learn specific academic, vocational, technical skills only, or does it also help them learn some of the "softer" skills, such as negotiation, teamwork, supervision, etc.?
Are the skills obtained portable, from firm to firm?
Are the skills obtained portable, from region to region?
How does this program/project/system lead to lifelong learning?

Continuous Improvement
What are the indicators of success/failure along the way once someone is in the program/system/project?
Do these indicators get periodically reviewed?
What factors are reviewed?
Does the result of the review change the program in any way?
Who participates in these reviews?
Are the trainers evaluated periodically?
If so, how and by whom?

Public-Private Partnerships
What are the employers' interests in this project?
To what extent, if any, have employers invested in the project, program, or system?
Is there any partnership between government, industry, education, NGO's, others?
What is the role of the public sector in this project?

Sustainable Financing
How is the project/program/system financed?
Are there multiple financing sources?
If so, what are they?
What costs, if any, are borne by the various stakeholders in this program?
About how much money is spent on education and training per individual in this project?
Is the financing system flexible?
Does it adapt itself to different funding circumstances?
If so, how?
Please provide information by type of financing, noting the relevant percentage contribution of each type, as well as the total annual budget of the organization.

Replicability
Do you think this project or approach is replicable somewhere else?
If so, why and how?
If not, why not?
If the program has been replicated, where, why and with what results? Do you have a copy of the evaluation reports (if any)? Which were the key indicators used?

Economic and Social Impact (environment, women, health, economic growth, democracy building)
Is there any data on the cost-effectiveness of the program/project/system? For instance, what are graduation/completion rates?
How many get jobs as a result of the program?
What is the difference in standard of living achieved before/after?
To what might these entry jobs lead?
To what extend does this project/program/system encourage sustainable environmental practices? Describe
Is there any technology transfer going on? If so, from where to where? (ex. large firms to small firms, etc.)

Case Criteria Sheet for Nominees for Best Practice (or Worst Practice) Cases
Please check those characteristics which apply to your best practice nomination, and describe your nominee on the reverse side. If you have more than one nomination, please copy this form and fill it out for each nomination.

Name of Nomination/Country/Contact_____

1. Which of the socioeconomic criteria does your case satisfy?

___ Mature policy/governance
___ Social cohesiveness
___ Established legal system
___ Knowledge infrastructure
___ Education system
___ Culturally appropriate

2. Which of the following guiding principles does your case exhibit?

___ Promotes economic development
___ Builds on or provides basic education skills
___ Employer-led
___ Public-Private partnership
___ Part of larger learning community
___ Flexible
___ Self-perpetuating
___ Sustainable
___ Customer-driven
___ Open and equitable
___ Promotes entrepreneurship
___ Encourages personal responsibility
___ Multiple-funders
___ Leveraged
___ Performance based
___ Market-driven

3. Which of the following operational (or programmatic) principles does your case exhibit?

___ Clear goals
___ Based on labor market systems
___ Open entry
___ Open exit
___ Competency (not time) based
___ Links education & work
___ Utilizes various learning technologies
___ Provides portable skills
___ Focus on deliverables
___ Establishes standards & certification
___ Uses external assessment
___ Cost-effective
___ Training-plus
___ Accountability is built in

Prepared by the Center for Workforce Development at EDC, 1996.

In your own words, please describe your nominee below in each of the three areas:

Nominee:_____

1. Meta-Contextual

2. Guiding Principles

3. Operational or Programmatic Principles

Nominations of Possible Workforce Development Case Studies

Africa

Botswana Brigades, Rural/middle, Botswana

Government run; major social/economic phenomenon
finish school and join the brigades
training is very effective economically
crafts, carpentry

Eritrea

Production and training of artificial eye lenses in the mountain caves during the war; on of the world's leaders in artificial eye lenses (Mozambique also) There's much literature on the Retrain case

Malawi Entrepreneurship Development Center

people are trained to produce and sell products
70-80% of people come out with technical and market skills

Mali

decentralizing authority with regard to primary schools, basic education and apprenticeships (maybe too new to analyze)

Mauritius Industrial Training Authority

funded in part by govt. if bringing in new factory, new jobs

Technical Teacher Training Program in Nigeria

vocational skills in High school, first upgrade skills of teachers
mainstream High school approach

Education with Production, Rural/poor, Zimbabwe, Malawi, S. Africa, Tanzania

work on farm and make things while in school to help finance the school
A group of schools collaborate internationally

UNISA middle/poor S. Africa

taking people out of the country; distance education
pro-active, affirmative action programs, long term fight about who should pay for training

Microenterprise and microfinance, Uganda

skilled training built-in; primarily for poor, rural women; many provide seed money, training; Women's World Banking, Gammin Bank, ICAP

Zimbabwe

teacher training college where teachers are required to grow their own crops, even if they're not going to be farmers

Nurses Training Facility, Urban/poo, Swaziland

trains nurse-midwives to work in the countryside (most want to work in an urban environment); became self-sustaining after losing donor support

Uganda, Microenterprise and microfinance

skilled training built-in; primarily for poor, rural women; many provide seed money, training; Women's World Banking, Gammin Bank, ICAP

Asia

St. Joseph's School, Poor, Bangladesh

students can earn money while there, have jobs
ngo school, self-sustained
training methods, vocational school
(John Middleton will send reports on apprenticeships in Africa)

Human Resources Development Fund, Malaysia

no government provision, firms have flexibility in how they do their training;
training levy-grant system
manufacturing and non-manufacturing

Penang Skills Development Center, Urban/middle, Malaysia

tri-partite: federal govt. gives money to get center going
companies write off training expenditures
state provides land, facilities
private sector: Japanese, American, Motorola, contribute instructors, equipment, money, keep technology current, get tax credit; in-service and initial training of employed workers--firms send their workers there.
All private institutions are registered with the Center;
Not expensive because costs are spread out across all firms
Must start with the private sector, "What do they want?"
do not start with training providers and hope that the people will come.
It's private sector driven and managed; have incentives to do it; govt. supports it
Serves the whole island, large industrial area
10-15,000 people pass through it each year
island, Chinese based, Malaysians come to work, English speaking
heavy presence of Japanese
urban, low-middle
transported Singapore model, new language skills, manufacturing skills, etc.

Singapore system:

presence of foreign technical schools, idea that country must adapt to the schools (we want to learn the German or Japanese way...)
maximum of foreign influence - English is now the official workplace language, German and Japanese bilateral assistance
model transferred to Southern China - is it too unique, Singapore?
Chinese government set up mini-Singapore's, 20 years Singapore, 10 years China
so, one should look at China
Chinese - putting it into the rural, undeveloped areas - how is that working??
Singapore - China
look at failures - talk to the old Singapore's

Mary Kay Cosmetics and Aetna Life Insurance in Asia Pacific

women do all the selling through family trees, direct to consumer, AMWAY Model
(Avon doing this in Russia, China, Latin America
Latin America: insurance, cultural resistance, family members selling to each other has helped to break that down, they all have built in training systems
Mary Kay Cosmetics (cont'd)
How do you start entrepreneurial relationships with young kids?
loyalty among friends more sacred than repaying loans (Grameen bank model)

China

SVS/STS, Urban/middle
secondary schools

Bangkok, Thailand

Mercedes Benz Center Urban/middle/rich
introduced German apprenticeship system into Asian country, made it work

Europe

Austria

a) traditional crafts and arts and sciences apprenticeships
e.g., ornamental iron work combined with advanced metallurgical science
combination of low-tech and high-tech.
b) EMCO
desk top milling machines and other machine tools, self-paced learning system - for high school kids
c) Blum and Co. - has the finest apprenticeship program

British Open Tech.

Open University at technical level
fund private enterprise to develop programs
all distance ed.

most purchased by private enterprise, different modules purchased by firms to train own workers, urban and rich

Denmark

Sonnenberg Technical College
Germans are going there for training

German BIZ system

career information centers in every city in Germany
profiles of occupation on videocassettes, for adults and school children, very urban, rich, expensive
German Institute for work
funded by a variety of sources
computerized
expanded into eastern Germany
includes counseling (but not training)
kids can go in and do career exploration, can play with tools, etc., mandatory for 5th - 7th graders, occupation outlooks
staffed by professionals who are a combination of counselors and bureau of labor statisticians
they actually go into plants
by the age of 15 or 16, kids have samples a lot of different work sites
also a mentoring system
a high degree of social cohesion
multi-firm training centers (15 or 16 small firms get together to offer training)

Dutch experience - Dutch National Skills Standard System (Enschede/SLO)

every major employer identifies skills standards for their occupations - current guidelines, electronic course, complete transferability, modify curricula accordingly
major Dutch corporations work with technical colleges and public schools, transfer R&D, contract with communicate colleges to teach courses about a new technology
Philips- Eidhoven School
building, testing, creating a market

Italy

micro financing of unemployed
pre-select people with skills
southern Italy

Radio Netherlands

microenterprise program via the radio

Pragda Training Center/Gdansk, Urban/middle, Poland

Started with funds from Coca-Cola and US AID (Pepsi already had market in Russia)
Housing is in high demand in Poland, oftne takes 25 years on a waiting list until get one. Poland had four general contractors, didn't really build anything.
Training center teaches students to go into business for self, learn how to build houses

Scotland - Telecroft

vocation ed. system, people go back to school modules, secondary diplomas, links with secondary schools
Highlands, Islands
Telecroft
microenterprises linked up with CDROM, Internet
fishing villages
bring technology into rural areas

Swiss/German/Austrian model:

youth apprenticeship system, you cannot ignore it, it is a source of inspiration for everyone

Switzerland: SIM Centers

all kinds of stuff going on in same room (different levels and institutions)
public-private blending
very sophisticated use of equipment
uses manufacturing engineers and different teachers.

small technical school in Switzerland -

every teacher, every student works on technical projects
technical development, not artificial examples, 115 students and teachers
all they do is development automated production islands - inventions commercialized by a firm owned by instructors and students - in St. Croix, urban, rich

Central America

Cimo, Urban and rural/middle, Mexico

network of small centers in all urban areas, housed in chambers of commerce
partially subsidized training
big impact on productivity

Zamorano

regional agriculture school in Honduras, v. practical,
6 week agriculture intensive field work; microenterprise
now a regional center serving the whole Central American region

Caderh - USAID in Honduras
rural, interactive radio, evaluation, skills program

Talieres Populares, Costa Rica
clone of SENAI is called INA - this is an adaptation
contrast: workshops provide equipment and instructors, poor people come into learn a trade - they start producing, selling
eventually open shop, instructors come in periodically, finances by a levy on the payroll, how do you know what to learn? The workers decide - they go out and set up chop and start a business or get a job

Latin America, in Senai, Senec, Sene, Columbia, Costa Rica, middle
large industrial apprenticeship training associations
regional study is available

Middle East
Israel: K-12 Instrumental Enrichment
Feurstein cognitive skills levels increase
very accessible, Ethiopian airlift
also interesting early child development dimensions

North America
Francis Tuttle Voc. School, Urban, Oklahoma City
training in aviation mechanics and saddle making
employers and school districts share financing of school
has a great reputation as a very credible school

Skyline School, Urban, Dallas, Texas
strictly industry-supported
trains for electronic industry, petrochemical industry
school was begun by industry and then turned over to the states

OIC, Urban, Philadelphia, PA
worked in W. Africa with AID support, occupational industrial centers,
begun by Leon Sullivan

Philadelphia, Work Plus (also in other cities)

Public-Private venture; mall jobs - sophisticated training in aspects of the industry like hiring, bookkeeping, nutrition - leads to a portfolio of skills, etc., more sophisticated entry-level portfolio

New England Suppliers Institute/ Bay State Institute

small and medium business in a large corporation

JAGS - Jobs for America's Graduates

a school-to-work program in Ohio

SCORE

retired executives teaching entrepreneurship skills
quality may be quite variable

Pro Tech in Boston

school - to- work
junior year of high school, technical jobs in hospitals, finish technical degree in community college, financed through business

The National Coalition of Advanced Technology Centers

advanced manufacturing program in Hagerstown, Maryland, employer-driven, students coming out of high school, adults who are incumbents, business enterprises develop centers
7 community colleges in this consortium, works with NIST

Oklahoma Community College system

High school and vocation schools - universities, very accessible

Springfield, Mass. Community College

Biotechnology distance learning - tied in with Biotech. community in New England region
any link with other center? no

Maine Youth Apprenticeship

urban poor

New Hampshire

automobile dealers - not enough automotive mechanics coming out - programs with technical colleges, worked with General Motors, Ford, Chrysler
automotive dealers initiative
work-based learning and corporate programs
funded by the state and industry

South Carolina

notorious for attracting new business
PACE - Partnership
High school, technical colleges, primary goal is economic development (not raining)
work closely with governors
so, education for the purpose of economic development

U.S. Armed Forces

very creative, low-level clientele, a lot of money (expensive!)

Fort Worth Basic Skills

programs in British Columbia, rural/rich

in Barnaby, Canada

Dade County, Maricopa Center, Arizona

alliances across the border, alliances with business
Community College - model: 1-stop information. centers, career centers

South America

Argentina

PROIMI, in Tucuman

high tech. skills
technicians and professionals being trained for health diagnostic projects , low-levers and PhDs, wine industry,
funds come from consortium of microbiology firms
works with indigenous people in Tucuman, rural and urban, medium level income
works across borders with Bolivians and Brazilian, entry-level and professional level

Brazil

SENAI

an adaptation of the youth apprenticeship model - a dual system combining coursework and apprenticeship
reliable

Rio de Janeiro- SENAI:

entire instruction is individualized, go at own pace, rolling admission, open entry, open exit, 12 months, only system that is owned by Federation of Industries, publicly funded by payroll tax, but owned by private enterprise (v. demand-driven)
experience is good - high quality
Methodical Series: (a Russian method - instead of course by disciples, a succession of practical tasks which contain math, science, drafting, writing - 35 pieces)
2 million different students, industrial labor force

Brazil: Telecurso 2000

GED and Mechanical technology by TV
experience of a TV station; going on for 18 years
1) paid for by industrialists
2) geared primarily to workers who do not have enough basic skills -through TV, videotapes, monitors (?), workbooks
in addition, is broadcast - more than a million people watch - books are sold in newspaper stands, you can take public GED exams
v. expensive TV production, but millions watch
also multiple delivery - many broadcast times during the day, it is also recorded
tapes are sold, too
redundancy in process of delivery, geared to basic skills, classroom is not replicated, scenes are from factory, etc. Travel agency is shown for learning English, etc.
mechanical, technical issues are shown through a small workshop, a master teaches an apprentice
these TV shows are in factories, community centers, and the HQ of the Federation of Industry has one

TV program in Brazil - Global Rural

Sat. morning, 10 million viewers. agricultural; [practice.
visits farmers who are doing best practice, 100% private funding, profitable, advertising, huge impact
same program for small business
both have a magazine that is sold widely

Chile

Partners in Productivity, Rural and Urban/middle

private schools, federal govt. contributed to get standards in the schools; commits employment to a certain number of students;
some teachers are from industry, other teachers spend time in industry
students make things, distribute profits among students, some money goes back to the school to buy supplies

Chilean Training System

training vouchers
incentives for firms
not much documentation

Fundacion Sociale in Bogota, Colombia

-microenterprises with garbage pickers on north coast of Colombia, sorting, business practices, they control the entire glass sorting and manufacturing business and paper recycling - exporting cellulose

educated their own families, civic education, child care centers, health, nutritional actions
private sector: unique training system, interesting conceptual basis, micro - small business - large business
going on for ten years
also, social communications center
you could kill this with too much money
dates back to the 1920s working with women of the streets
basically business people with a social conscience

Numerous Countries

ORT Schools *Costa Rica, Eastern Europe, Israel*

Begun to train Russian Jews; workforce prep. training, not academic
funded by World Bank, AID, private orgs.

Motorola and Seimens

Training and direct foreign investments; providing training to suppliers; self-interest; located world wide

Motorola University

industrial university, a technology transfer
Motorola only comes into countries with 100% ownership, finally came into China
only 3 expats in Beijing office; Motorola University, two in Vietnam with Washington State University